NAVY TRAINING SYSTEM PLAN

FOR THE

COMBAT SURVIVOR/EVADER LOCATOR

N88-NTSP-A-50-0018/P

NOVEMBER 2001

COMBAT SURVIVOR/EVADER LOCATOR

EXECUTIVE SUMMARY

The Combat Survivor/Evader Locator (CSEL) is a communication system that will provide United States Military Forces with secure, two-way communication for personnel in a survival and evasion scenario. The CSEL will be capable of near real-time communications with a low probability of interception and detection. It will provide precise Global Positioning System based geoposition and navigation data, two-way Over-The-Horizon (OTH) secure data communication to Joint Search and Rescue Centers, OTH beacon operation, and Line-Of-Sight voice communication and beacon capabilities. This will enhance the Combat Search and Rescue response capabilities to locate and communicate with isolated personnel, independent of their location or circumstances. CSEL is currently in the System Development and Demonstration Phase of the Defense Acquisition System. Milestone C (Authority to Enter Into Limited Rate Initial Production or Procurement) will be reached in second quarter Fiscal Year (FY) 02.

Joint Operational Assessment (OA) was completed in February 2001. Joint OA was conducted by the Air Force Operational Test and Evaluation Center, the Navy Operational Test and Evaluation Force, and the Army Operational Test and Evaluation Command. Multi-Service Operational Test and Evaluation is scheduled to begin in fourth quarter FY02.

Personnel required to build load files and actually load the CSEL will vary, depending on the specific community and their operational capabilities. Personnel identified to perform this include Pilots, Naval Flight Officers, Aviation Warfare Systems Operators and other enlisted aircrew members, Aviation Electronics Technicians, Aircrew Survival Equipmentmen (PRs), Information Systems Technicians, Naval Special Warfare (NSW) SEALs, Electronics Technicians, Marine Corps Avionics and Flight Equipment Mechanic personnel, and squadron or unit qualified Communications Security personnel.

Navy and Marine Corps organizational level maintenance technicians and NSW Communication Support personnel will perform limited maintenance of the CSEL.

CSEL training will consist of several methods and media, and may include formal courses, Computer-Based Training (CBT), videos, and On-the-Job Training (OJT). Fleet Air Introduction Liaison Survival Aircrew Flight Equipment Tiger Teams will introduce CSEL to Navy, Marine Corps, and NSW units; and local Aeromedical Safety Officers will provide refresher and pre-deployment training. Follow-on training for aircrew personnel will be provided during basic flight training at the Aviation Survival Training Centers, and during Survival, Evasion, Resistance, and Escape training. Follow-on training for aircrew survival equipment maintenance personnel will be accomplished by adding CSEL information to *C-602-2035, Aircrew Survival Equipment Common Core Class A1*, which is the existing Class A1 school for the PR rating. Training for other maintenance rating personnel will be accomplished through OJT-reinforced CBT. Follow-on

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training for NSW operators and support personnel will be accomplished through the Advanced Communications Course resident at Commander Naval Special Warfare Group One (CNSWG-1) located in San Diego, California, and CNSWG-2 located in Little Creek, Virginia. Follow-on training for personnel building load sets and loading the radio sets will be accomplished through OJT-reinforced with CBT.

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LIST OF ACRONYMS

ALSS	Aviation Life Support Systems
AMSO	Aeromedical Safety Officer
AMTCS	Aviation Maintenance Training Continuum System
ASTC	Aviation Survival Training Center
AT	Aviation Electronics Technician
CD-ROM	Compact Disk-Read Only Memory
CIN	Course Identification Number
CINCLANTFLT	Commander in Chief, Atlantic Fleet
CINCPACFLT	Commander in Chief, Pacific Fleet
CM	Corrective Maintenance
CMC	Commandant of the Marine Corps
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
COSPAS	Cosmicheskya Systemya Poiska Avararihich Sudov (Space System for the Detection of Vessels in Distress)
CPC	CSEL Planning Computer
CPE	CSEL Planning Equipment
CSEL	Combat Survivor/Evader Locator
DA	Developing Agency
DII-COE	Defense Information Infrastructure-Common Operating Environment
ET	Electronics Technician
FAILSAFE	Fleet Air Introduction Liaison Survival Aircrew Flight Equipment
FASOTRAGRULANT	Fleet Aviation Specialized Operations Training Group, Atlantic
FMS	Foreign Military Sales
FY	Fiscal Year
GDN	Ground Dissemination Network
GPS	Global Positioning System
HHR	Hand Held Radio
Hz	Hertz
ILSP	Integrated Logistics Support Plan

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LIST OF ACRONYMS

IMI	Interactive Multimedia Instruction
IT	Information Systems Technician
JSRC	Joint Search and Rescue Center
JTPT	Joint Training Planning Team
LOS	Line-Of-Sight
LPI/D	Low Probability of Intercept/Detection
MATMEP	Maintenance Training Management and Evaluation Program
MCAS	Marine Corps Air Station
MCCDC	Marine Corps Combat Development Command
MOS	Military Occupational Specialty
MOT&E	Multi-Service Operational Test and Evaluation
MPT	Manpower, Personnel, and Training
MSD	Material Support Date
MTBF	Mean Time Between Failure
MTIP	Maintenance Training Improvement Program
NA	Not Applicable
NAF	Naval Air Facility
NAS	Naval Air Station
NATTC	Naval Aviation Technical Training Center
NAVAIRSYSCOM	Naval Air Systems Command
NAVPERSCOM	Naval Personnel Command
NEC	Navy Enlisted Classification
NFO	Naval Flight Officer
NS	Naval Station
NSA	National Security Agency
NSW	Naval Special Warfare
NTSP	Navy Training System Plan
OA	Operational Assessment
OJT	On-the-Job Training
OPNAV	Office of the Chief of Naval Operations
OPO	OPNAV Principal Official
OTH	Over-The-Horizon

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LIST OF ACRONYMS

PDA	Principal Development Activity
PM	Preventive Maintenance
PMA	Program Manager, Air
PMW	SPAWAR Program Manager, Warfare
PR	Aircrew Survival Equipmentman
RFT	Ready For Training
RSA	Radio Set Adapter
SAR	Search And Rescue
SARSAT	Search And Rescue Satellite Assisted Tracking
S/E	Survivor/Evader
SEAL	Sea Air Land
SEATS	Survival Equipment Asset Tracking System
SERE	Survival, Evasion, Resistance, and Escape
SPAWARSYSCOM	Space and Naval Warfare Systems Command
SPETE	Special Purpose Electronic Training Equipment
TSA	Training Support Agency
TTE	Technical Training Equipment
TYCOM	Type Commander
UBS	UHF Base Station
UHF	Ultra-High Frequency
UHFSATCOM	Ultra-High Frequency Satellite Communications
UIC	Unit Identification Code
USAF	United States Air Force
VAC	Volts Alternating Current

COMBAT SURVIVOR/EVADER LOCATOR

PREFACE

This Proposed Navy Training System Plan (NTSP) is an update to the Combat Survivor/Evader Locator (CSEL) Draft NTSP, dated August 2001. It includes CSEL implementation concerns that will affect operational, maintenance, manpower, and training concepts that ultimately drive the Manpower, Personnel, and Training (MPT) system requirements to support the CSEL. This NTSP has been updated to comply with guidelines set forth in the Navy Training Requirements Documentation Manual, Office of the Chief of Naval Operations (OPNAV) Publication P-751-1-9-97. This NTSP incorporates comments from the Chief of Naval Education and Training (N7) concerning levels at which maintenance is performed; the Naval Air Systems Command (PMA205); the Space and Naval Warfare Systems Command; the Naval Special Warfare Command; the Navy Manpower Analysis Center; and Marine Helicopter Squadron One (HMX-1), with the vast majority of comments being verbiage changes in Part I for clarity.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. **Nomenclature-Title-Acronym.** Combat Survivor/Evader Locator (CSEL)

2. **Program Elements.** 35176F and 65712F

B. SECURITY CLASSIFICATION

1. **System Characteristics** .... Unclassified
2. **Capabilities** .... Unclassified
3. **Functions** .... Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor.................................... CNO (N780)

OPO Resource Sponsor .... CNO (N780)

Air Force Program Sponsor (Program Lead)... SMC/CZ

Marine Corps Program Sponsor.. CMC (APW-71)

Developing Agency.. SPAWARSYSCOM (PMW/PMA156)
NAVAIRSYSCOM (AIR 3.1.4)

Training Agency .... CINCLANTFLT (N71)
CINCPACFLT (N70)
CNET (ETE-32)

Training Support Agency.. NAVAIRSYSCOM (PMA205)

Manpower and Personnel Mission Sponsor... CNO (N12)
NAVPERSCOM (PERS-4, PERS-404)

Director of Naval Training.. CNO (N795)

Marine Corps Force Structure... MCCDC (C53)

D. SYSTEM DESCRIPTION

1. Operational Uses. CSEL is an emergency survival communication system that will provide United States military forces with secure, two-way communication for personnel in a Survivor/Evader (S/E) scenario. CSEL is capable of near real-time communications with a Low Probability of Interception/Detection (LPI/D) functionality, and will additionally provide precise Global Positioning System (GPS) and navigation data, two-way Over-The-Horizon (OTH) secure data communication to Joint Search and Rescue Centers (JSRC), OTH Beacon, and Line-Of-Sight (LOS) voice communications. This will enhance the Combat Search and Rescue response capabilities to locate and communicate with isolated personnel, independent of their location or circumstances.

This NTSP focuses on the User Segment of the CSEL as it applies to Navy and Marine Corps combat aircrews and Navy Special Warfare (NSW) operators and support personnel usage, refer to figure I-1. Navy and Marine Corp Special Forces Personnel will also employ CSEL. Initial training will be provided by Aeromedical Safety Officer (AMSO) to their instructors; subsequent training will be done internally.

2. Foreign Military Sales. Future Foreign Military Sales (FMS) to North Atlantic Treaty Organization countries and allied nations are under consideration. For information on FMS, refer to Naval Air Systems Command (NAVAIRSYSCOM) AIR 3.1.4.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.

Joint Operational Assessment (OA) was completed in February 2001. Joint OA was conducted by the Air Force Operational Test and Evaluation Center, the Navy Operational Test and Evaluation Force, and the Army Operational Test and Evaluation Command. Multi-Service Operational Test and Evaluation (MOT&E) is scheduled to begin in fourth quarter Fiscal Year (FY) 02.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.

The AN/PRQ-7 Radio Set will replace the AN/PRC-112B Radio Set as systems become available and as the AN/PRC-112B is transitioned out of current fleet inventories.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The CSEL system will provide global coverage with the following capabilities:

- Precision GPS-Based Geoposition and Navigation Data
- Two-Way OTH Secure Data Communication to a JSRC
- LOS Voice Communication
- Selective Availability/Anti-Spoofing Module
- Built-In Commercial Growth

The CSEL System will consist of three segments as shown in Figure I-1: OTH, Ground, and User. The User Segment directly applies to Navy and Marine Corps squadrons. These segments are described in the following sub-paragraphs.
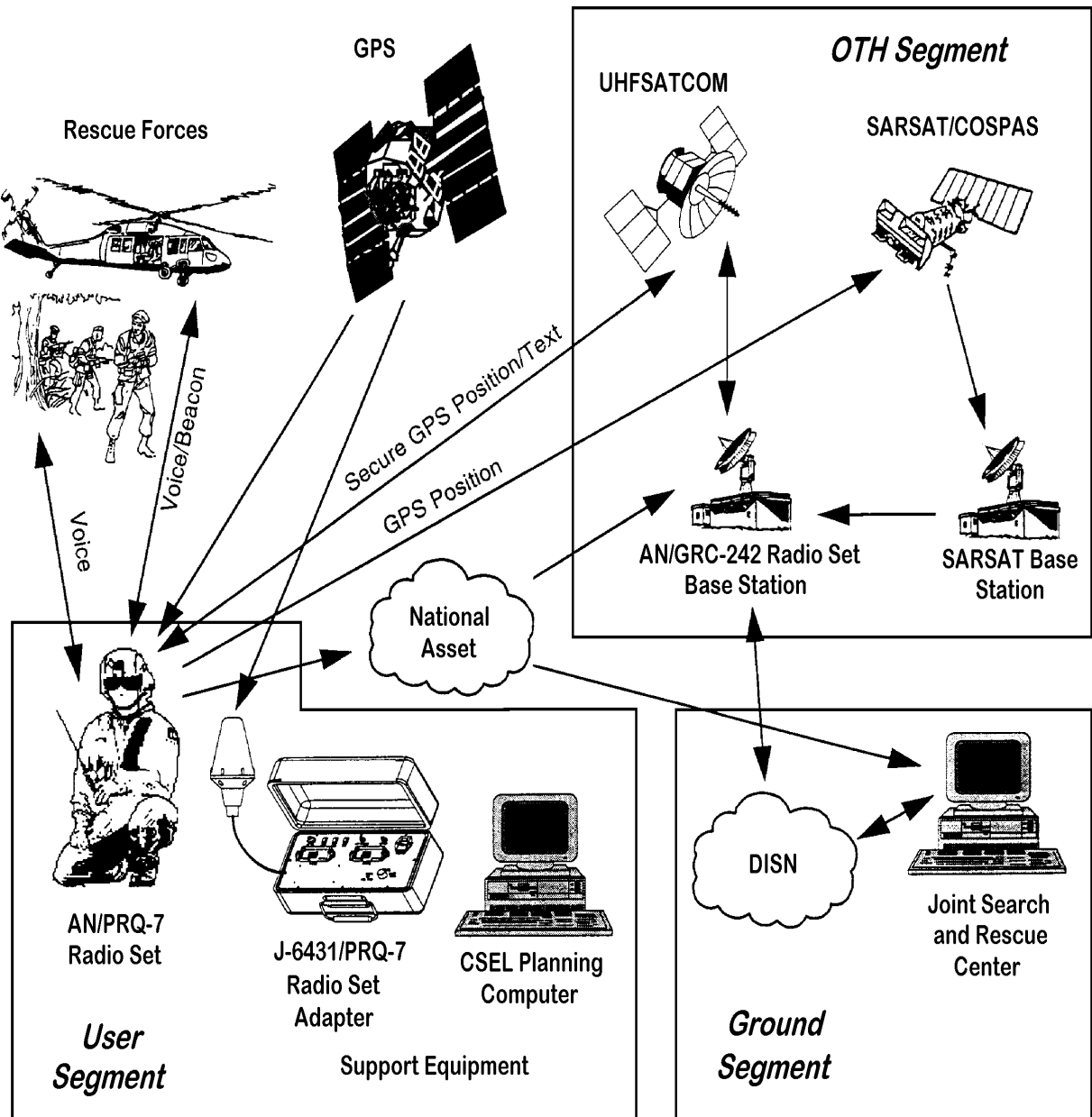

Figure I-1. CSEL System Architecture

a. Over-The-Horizon Segment. The OTH Segment will consist of the OTH Communication Systems and the AN/GRC-242 Radio Set Base Station that interconnects the OTH and Ground Segments. The AN/GRC-242 Radio Set Base Station is also called the Ultra-

High Frequency (UHF) Base Station and will be referred to as such throughout this document. The OTH Communication System will relay critical information from isolated personnel to the appropriate JSRCs for decision-making and response planning. The OTH Communication System will operate over three systems: UHF Satellite Communications (UHF SATCOM), National Assets, and Search and Rescue Satellite Assisted Tracking (SARSAT). The UHF Base Station (UBS) will be capable of two-way communication relays such as location, identification, and authentication information between the S/E and the Ground Segment.

(1) **Satellite Communication.** The UHF SATCOM mode will support two-way messaging, which includes geoposition information between a UBS and an S/E's AN/PRQ-7 Radio Set through an allocated UHF SATCOM channel. The National Assets will support one-way messaging, including geoposition information from the Radio Set using the Low Probability of Exploitation (also known as (a.k.a.) LPI/D) National Assets waveform. This supplements UHF SATCOM in areas of high intercept threat where National Assets coverage is likely to be provided. AN/PRQ-7 Radio Set National Assets transmissions are acknowledged by the JSRC via the UBS and UHF SATCOM satellite. The SARSAT operates over the international Cosmicheskya Systemya Poiska Avararihich Sudov ((COSPAS) a.k.a. "Space System for the Detection of Vessels in Distress")-SARSAT system and is intended for emergency coverage above 70° latitude where UHF SATCOM and National Assets coverage is marginal, as well as backup coverage through the civil Search And Rescue (SAR) system.

(2) **AN/GRC-242 Radio Set Base Station.** The UBS is expected to be capable of supporting two-way OTH data communication with as many as 200 CSEL Radio Sets in a Time Division Multiple Access protocol through the UHF SATCOM satellite system. Received messages are automatically relayed to the JSRCs through a Ground Dissemination Network (GDN). The UBS will also be capable of receiving messages transmitted via National Assets and the COSPAS-SARSAT system, but will not be able to return messages via these two systems. The UBS will consist of three equipment consoles: one active unit and one backup unit on standby at all times, and one communications unit. Two units will be identical and share a common antenna.

b. **Ground Segment.** The Ground Segment will be composed of JSRCs and the GDN that interconnects with the UBS. The Ground Segment functions will include CSEL data reception, display, and dissemination capabilities in the JSRCs, and data reception and processing to and from the UBS.

(1) **Joint Search and Rescue Centers.** JSRCs will be designated in operational theaters to coordinate the rescue operations for downed aircrew, isolated personnel, or other forces. A JSRC may be located at a fixed ground site, in a mobile unit, or aboard a ship. The CSEL System will establish primary and backup JSRCs. The primary JSRC will usually be in the user's operational theater and assume the primary responsibility for coordinating rescue or other operations. A backup JSRC will be assigned if the operational situation warrants.

JSRCs are equipped with Defense Information Infrastructure - Common Operating Environment (DII-COE) work stations through which the CSEL application can

operate simultaneously with other functions. In some cases, a JSRC workstation may be directly interfaced to Tactical Receive Equipment, which provides direct access to the National Assets messages without having to wait for the UBS to retransmit the information over the GDN.

(2) Ground Dissemination Network. The GDN provides a highly reliable and timely global connection between all CSEL ground elements by utilizing the existing Defense Information System Network with DII-COE compatible protocols.

c. User Segment. The User Segment consists of the AN/PRQ-7 Radio Set [Hand Held Radio (HHR)], which is employed by combat aircrew personnel (as well as other military personnel) and the CSEL Planning Equipment (CPE). The CPE consists of the CSEL Planning Computer (CPC) used to load mission specific information into the HHR prior to a mission and the J-6431/PRQ-7 Radio Set Adapter (RSA) that provides the interface between the CPC, the GPS key fill device, and the HHR.

(1) AN/PRQ-7 Radio Set. The HHR provides limited data communication for all OTH modes, SAR aircraft-compatible LOS voice communication, COSPAS-SARSAT 406 megahertz beacon, and precise geopositioning to the user. The HHR is designed for one-handed operation (right or left) with flight gloves or modified winter gloves. Once the HHR is activated, it may be polled by the JSRC workstation without further action.

(2) Combat Survivor/Evader Locator Planning Equipment

(a) J-6431/PRQ-7 Radio Set Adapter. The RSA serves as the interface between the CPC and the reference HHR and interfaces the reference HHR with the target HHR. This is how data is transferred from the reference to as many HHRs that are going to be used during the operation. The reference HHR stays resident in the RSA, while the target HHRs are loaded one after another. The RSA performs such functions as commanded by the CPC, which include loading mission parameters and precision GPS time and interfacing the Radio Set to the GPS key fill device. The RSA is portable, has a standard zero case design, and uses a universal Alternating Current power supply. The RSA provides power to the HHR during loading.

(b) Combat Survivor/Evader Locator Planning Computer. The CPC will host CSEL application software that allows an operator to load and download the HHR. The RSA serves as an interface device between the HHR and CPC. The CPC and RSA will be used to provide post mission analysis, and load a target HHR with mission specific data including communications frequencies and channels, waypoints, standardized messages, Unit Identification Codes (UIC), call signs, and passwords.

2. Physical Description

a. AN/GRC-242 Radio Set Base Station Console. The UBS Console measures 84 inches high, 22.5 inches wide, and 30 inches deep (42 inches with the keyboard extended), and weighs 300 pounds. It requires 115 Volts Alternating Current (VAC), 60 Hertz (Hz) at 20 amperes from two independent sources.

b. AN/PRQ-7 Radio Set. The HHR will be able to withstand saltwater immersion and the shock, vibration, and Gravity (G)-force associated with operator emergency egress and personnel recovery operations. The HHR will be designed to fit into all current survival vests, rucksacks, and ejection seat packs, as it is a fit, form, and function replacement for the AN/PRC-112. It will measure 7.8 inches high, 3.2 inches wide, and 1.6 inches deep, and weighs 31.8 ounces.

The HHR physical characteristics include an earphone jack, speaker-microphone, keypad, volume control, push-to-talk button, Light Emitting Diode, and Liquid Crystal Display. The main power source of the HHR is a Lithium Sulfur Dioxide battery with a life expectancy of 19 days at 25° Celsius. Power saving features and operation above 25° Celsius will extend the life of the battery.

c. J-6431/PRQ-7 Radio Set Adapter. The RSA will be a suitcase unit that measures 10 inches high, 16 inches wide, and 8 inches deep, and weighs less than 10 pounds. The RSA power requirements will be 115/240 VAC, 50/60 Hz at one ampere.

d. Combat Survivor/Evader Locator Planning Computer. The CPC will be a ruggedized International Business Machine-compatible computer with the following minimum specifications: a processor speed of 100 megahertz, 32 megabytes of Random Access Memory, a 100 megabyte hard disk drive, a 16x Compact Disk-Read Only Memory (CD-ROM) drive, a 3.5" floppy disk drive, a single Universal Serial Bus (USB) port, a Variable Gain Amplitude monitor, a standard 101 keyboard, and utilize Windows 2000 or current equivalent operating system.

3. New Development Introduction. The CSEL HHR, RSA, and UBS equipment, as well as CSEL software for the UBS, JSRC, and CPC, will be introduced into the fleet as new production items.

4. Significant Interfaces

a. Combat Survivor/Evader Locator Systems. The CSEL system will provide interfaces between the S/E, JSRCs, and several different satellite and communications systems for a variety of available communications capabilities, including GPS, voice, and data link. The UBS will link Ultra-High Frequency Satellite Communications (UHFSATCOM), National Assets, and COSPAS-SARSAT systems to the JSRCs. In addition, the CSEL System will allow rescue forces to interface directly with the S/E using LOS communications.

b. Communications Security. The HHR will incorporate National Security Agency (NSA) approved Communications Security techniques to protect the unit against extraction of crypto keys. A NSA endorsed encryption algorithm will be used to protect UHFSATCOM and National Assets transmissions. A zeroizer feature will be included to permit the user to purge volatile memory. There will be two levels of zeroization available to the user. When HHR is zeroized once, the user may continue to use the Radio Set; however, the JSRC operator will be alerted that the HHR may be in hostile hands and must re-authenticate the user's identification. When HHR is zeroized a second time, it will provide Amplitude Modulation voice

communication on factory-set default frequencies and be reduced to course acquisition code GPS capabilities.

     5. New Features, Configurations, or Material. The HHR will be designed for future growth to include a commercial L/S Band module, the Downed Aircrew Locating System (DALS), and an antenna for interfacing with commercial satellite communications systems.

H. CONCEPTS

     1. Operational Concept. At the operator level, the CSEL operational concept will employ two groups. Navy and Marine Corps aviators [i.e., Pilots, Naval Flight Officers (NFO), and enlisted aircrew] and NSW operators (SEAL) who operate the Radio Set in the S/E environment. Navy and Marine Corps officer and enlisted personnel and NSW communication support personnel will operate the CPE to load mission critical data into the HHR.

     2. Maintenance Concept

          a. Organizational. Organizational level maintenance will be performed by the following:

- Navy and Marine Corps personnel in the Aviation Life Support Systems (ALSS) Work Center
- Enlisted aircrew personnel
- Navy personnel with Navy Enlisted Classification (NEC) 83XX, including Aviation Electronics Technicians (AT)
- Marine Corps personnel with Military Occupational Specialty (MOS) 63XX and 6048
- Information Systems Technicians (IT), NEC 23XX
- Electronics Technicians (ET), NEC 14XX
- NSW (SEAL), NEC 5326

          (1) AN/PRQ-7 Radio Set. Preventive Maintenance (PM) is limited to performing self-test using Built-In Test (BIT). There are two levels of BIT: internal BIT on the HHR and a more comprehensive BIT using the CPE. Corrective Maintenance (CM) is limited to replacing the battery and possibly replacing the UHF/Very High Frequency antenna.

          (2) Combat Survivor/Evader Locator Planning Equipment. PM is limited to operational checkout, periodic inspections, and cleaning. CM includes troubleshooting to fault-isolate to a particular equipment item or cable, and on-equipment repair by removal and replacement procedures.

          b. Intermediate. Not Applicable (NA)

c. Depot. For the HHR and RSA, the Boeing Company will accomplish all maintenance beyond the organizational level. The HHR will be under a ten-year warranty. The RSA will be covered by a maintenance agreement between the government and Boeing.

d. Interim Maintenance. Currently, there is no plan for interim maintenance for the Radio Set and CPE. If interim maintenance requirements are identified, it will be under the cognizance of the United States Air Force (USAF).

e. Life Cycle Maintenance Plan. NA

3. Manning Concept. The manpower requirements for CSEL include requirements for operators and maintainers. Operators of the HHR will include Navy and Marine Corps Pilots, NFOs, NSW SEALs, and enlisted aircrew. Operators of the CPE will include Navy and Marine Corps officer and enlisted personnel. Enlisted ALSS personnel, enlisted aircrew, AT and IT personnel, and NSW SEAL and communication support personnel will perform various maintenance aspects of the HHR, RSA, and CPC. An analysis of the operation and maintenance functions associated with these CSEL components indicates these tasks are within the capabilities of existing Navy Officer Billet Codes, Navy Enlisted Occupational Standards (ratings), and the Marine Corps MOS structure.

a. Estimated Mean Time Between Failure. The Mean Time Between Failure (MTBF) for the Radio Set is expected to be 3000 hours. The MTBF for the RSA and CPC has not yet been determined.

b. Proposed Utilization. At Full Operational Capability, the AN/PRQ-7 HHR will be used by all tactical operational forces including Pilots, aircrew personnel, NSW SEALs and supporting crews, and Marine Corps personnel going forward into combat with the probability of being in a S/E situation.

c. Recommended Qualitative and Quantitative Manpower Requirements

(1) Aircrew. Aircrew manpower requirements are determined by the seat factor and crew ratio listed in the appropriate squadron Required Operational Capability and Projected Operational Environment documents. Since CSEL will not impact these factors, current aircrew requirements will not change as a result of the introduction of CSEL.

(2) NSW Forces. NSW 5326 SEAL personnel will operate the HHR. Since CSEL will not impact any operational factors, current manpower requirements will not change as a result of the introduction of CSEL.

(3) Maintenance. Maintenance of the HHR will be performed by Navy and Marine Corps ALSS personnel, enlisted aircrew personnel, Navy NEC 83XX and Marine Corps 63XX personnel, and NSW support personnel with NEC IT 23XX, ET 14XX, and 5326 SEAL. Maintenance of the CPC will be performed by squadron or unit Information Technology personnel. Maintenance of the RSA will be performed by Navy and Marine Corps Aviation Electronics Technician personnel with NEC 83XX and MOS 63XX, and NSW personnel with ET

14XX. It is anticipated that the ALSS, Avionics, IT, and NSW communications support Divisions will be able to maintain the equipment with no increase in manpower.

The data to be loaded into the HHR is obtained from the Operations Department, Communications Department, and Classified Material Storage Custodian, and includes communication frequencies, waypoints, call signs, GPS keys, and user information. Since some of this data is classified, personnel tasked to load the HHR will require a Secret security clearance.

The procedure for loading the HHR involves obtaining a GPS fix on a HHR to be designated as the reference HHR. The CPC and GPS key fill device are connected to the RSA. The reference HHR and a target HHR are set into the RSA. The person performing the loading function must also enter mission and personal data into the CPC through the keyboard.

Since the CPC will be used to load classified data, it will require a secure area for use and storage. The HHR is classified to the level of the waypoints entered, as these are the only items retrievable by an operator.

The ALSS Work Center uses the Survival Equipment Asset Tracking System (SEATS) to track the AN/PRC-112Bs and will add CSEL Radio Sets to SEATS. Under some circumstances when the HHR is keyed to a higher classification level, it will become necessary to track and report assets in accordance with current Defense Communications Security Material System policy and procedures.

It takes approximately eleven minutes to set up the CPE and load one HHR. Each successive HHR takes approximately two to three minutes. The total man-hours expended on a daily basis loading HHR will vary for each type of unit, depending on the number of operators and the operations schedule.

4. **Training Concept.** A Joint Training Planning Team (JTPT) has been established to ensure that all military services provide consistent CSEL training. However, the JTPT will not dictate how each service should train their personnel. The Navy and Marine Corps CSEL training concept covered in this NTSP will consist of initial and follow-on training for CSEL users and maintenance personnel. CSEL training will consist of several methods and media, and may include formal courses, On-the-Job Training (OJT), and Interactive Multimedia Instruction (IMI).

The CSEL training concept will be similar to other Navy survival equipment in that Pilots, NFOs, enlisted aircrew, and SEALs must become familiar with the HHR as soon as possible and maintain proficiency. This familiarization will be in the form of HHR training during basic Pilot and NFO pipelines, at the Aviation Survival Training Centers (ASTC), during Survival, Evasion, Resistance, and Escape (SERE) training, and NSW Advanced Operator (SEAL) and Communication Courses. Proficiency follow-on training will be provided by AMSO and through the use of CBT.

a. Initial Training. CSEL initial training was provided for personnel who participated in OA, and will be provided for personnel participating in MOT&E. Other personnel requiring CSEL initial training include AMSO and Fleet Air Introduction Liaison Survival Aircrew Flight Equipment (FAILSAFE) personnel.

Title	**CSEL Operation and Familiarization**
Description	This course provides training to Pilots, NFOs, enlisted aircrewman, NSW SEALs and support personnel including:
	° CSEL Capabilities, Limitations, and Operation ° Radio Set Functions and Operation
	Upon completion, the student will be able to employ the CSEL system during S/E situations.
Location	TBD
Length	2 days
RFT date	Currently available
TTE/TD	CSEL Equipment

Title	**CSEL Radio Set Loading and Maintenance**
Description	This course provides training to the organizational level maintenance technician, including:
	° CPC Setup and Operation ° RSA Setup and Operation ° Radio Set Loading and Maintenance Procedures
	Upon completion, the student will be able to properly configure the CPC and RSA, load the HHR with mission data, and perform the required maintenance actions in an organizational level environment under limited supervision.
Location	TBD
Length	2 days
RFT date	Currently available
TTE/TD	CSEL Equipment
Prerequisite	Secret Security Clearance

The FAILSAFE Tiger Teams will develop demonstration packages to support the introduction of CSEL. This will include HHR controls and indicators, HHR operation, CPE

operation and maintenance, HHR loading and maintenance, and battery conservation. The Tiger Teams will provide this introduction to:

- Fleet squadrons as they receive their CSEL assets
- ASTCs for follow-on physiology training
- AMSOs for pre-deployment training
- SERE training activities
- NSW Group training and operational facilities

b. Follow-on Training

(1) **Aircrew.** Navy and Marine Corps aircrew personnel will receive instruction on the functions and proper use of the HHR during basic Pilot and NFO pipelines, at the ASTCs, and during SERE training. Refresher training will be provided by local AMSOs prior to or while on deployments. CBT will also be available for training on an as needed basis to maintain proficiency. The following is a list of training sites and courses identified to perform CSEL training. This list may not be all-inclusive, but will be updated as further information regarding courses into which CSEL will be incorporated becomes available.

CIN	COURSE	LOCATION
D-2D-0039	Survival, Evasion, Resistance, and Escape	Fleet Aviation Specialized Operations Training Group, Atlantic (FASOTRAGRULANT) Detachment Brunswick
D-2G-0028	Advanced Survival, Evasion, Resistance, and Escape	FASOTRAGRULANT Detachment Brunswick
D-2G-0032A	Advanced Evasion	FASOTRAGRULANT Detachment Brunswick
D-2G-0012	Cold Weather Environmental Survival Training	FASOTRAGRULANT Detachment Brunswick
D-012-0001	Survival, Evasion, Resistance, and Escape Instructor Under Training	FASOTRAGRULANT Detachment Brunswick
C-602-2035	Aircrew Survival Equipmentman (PR) A1	Naval Aviation Technical Training Center (NATTC) Pensacola

(2) **NSW SEAL Operators and Support Personnel.** Follow-on training for NSW operators and support personnel will be accomplished through the Advanced Communications Course resident at Commander Naval Special Warfare Group One (CNSWG-1)

located in San Diego, California, and CNSWG-2 located in Little Creek, Virginia. Follow-on training for personnel building load sets and loading the radio sets will be accomplished through OJT-reinforced CBT.

(3) **Maintenance.** CSEL information will be added to course *C-602-2035, Aircrew Survival Equipmentman (PR) A1* for ALSS personnel. This will be a minor revision and is not expected to increase the current course length. Training for other maintenance rating personnel will be accomplished through OJT-reinforced CBT. Refresher training will be provided by FAILSAFE personnel or by local AMSOs prior to deployments.

c. **ALSS Student Profiles**

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
PR	C-602-2035, Aircrew Survival Equipmentman (PR)
MOS 6048	C-602-2035, Aircrew Survival Equipmentman (PR)

d. **Training Pipelines.** No new training pipelines will be established to support the introduction of CSEL User Segment Equipment.

I. ONBOARD (IN-SERVICE) TRAINING

1. **Proficiency or Other Training Organic to the New Development.** Navy and Marine Corps personnel will receive HHR proficiency training and loaders will receive refresher training from FAILSAFE personnel or local AMSOs prior to deployment. All aircrew members will receive CSEL training during refresher aviation physiology training at ASTCs as prescribed.

a. **Maintenance Training Improvement Program.** Current planning is to adopt the Aviation Maintenance Training Continuum System (AMTCS) concepts to replace the Maintenance Training Improvement Program (MTIP). AMTCS is scheduled to begin full implementation for fleet deployment in FY02.

b. **Aviation Maintenance Training Continuum System.** AMTCS will provide career path training to the Sailor or Marine from their initial service entry to the end of their military career. AMTCS is planned to be an integrated system that will satisfy the training and administrative requirements of both the individual and the organization. The benefits will be manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. By capitalizing on technological advances and integrating systems and processes where appropriate, the right amount of training can be provided at the right time, thus meeting the Chief of Naval Operation's (CNO) mandated "just-in-time" training approach.

Technology investments enable the development of several state-of-the-art training and administrative tools: IMI for the technicians in the Fleet in the form of Interactive Courseware with Computer Managed Instruction and Computer Aided Instruction for the schoolhouse.

Included in the AMTCS development effort is the AMTCS Software Module which provides testing (Test and Evaluation), recording (Electronic Certification Qualification Records), and a Feedback system. The core functionality of these AMTCS tools are based and designed around the actual maintenance-related tasks the technicians perform, and the tasks are stored and maintained in a Master Task List data bank. These tools are procured and fielded with appropriate Commercial Off-The-Shelf hardware and software, i.e., Fleet Training Devices - Laptops, Personal Computers, Electronic Classrooms, Learning Resource Centers, operating software, and network software and hardware.

Upon receipt of direction from OPNAV (N789H), AMTCS concepts are to be implemented and the new tools integrated into the daily training environment of all participating aviation activities and supporting elements. AMTCS will serve as the standard training system for aviation maintenance training within the Navy and Marine Corps, and is planned to supersede the existing MTIP and Maintenance Training Management and Evaluation Program (MATMEP).

2. Personnel Qualification Standards. Personnel Qualifications Standards have not yet been determined.

3. Other Onboard or In-Service Training Packages. CSEL information will be integrated into existing OJT packages. Each Navy and Marine Corps unit has an OJT program that has been tailored to their operational requirements.

Marine Corps onboard training is based on the current series of MCO P4790.12, Individual Training Standards System and MATMEP. This program is designed to meet Marine Corps, as well as Naval Aviation Maintenance Program maintenance training requirements. It is a performance-based, standardized, level-progressive, documentable, training management and evaluation program. It identifies and prioritizes task inventories by MOS through a front-end analysis process that identifies task, skill, and knowledge requirements of each MOS. MTIP questions coupled to MATMEP tasks will help identify training deficiencies that can be enhanced with refresher training. AMTCS will replace MATMEP approximately FY03.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
F04701-96-C-0020 (USAF)	Battle Management Command Control & Communications Strategic Systems Division, Boeing Company	3370 Miraloma Avenue P.O. Box 3105 Anaheim, CA 92803-3105

2. Program Documentation. The GPS Integrated Logistics Support Plan (ILSP) for CSEL dated May 1998 is currently being updated. The current Draft version is dated April 2001.

3. Technical Data Plan. The following currently available documents address various technical aspects of the CSEL system:

- AN/PRQ-7 Radio Set Operator's Manual .... NAVAIR 16-30PRQ7-1
- AN/PRQ-7 Radio Set Operator's Check List ... NAVAIR 16-30-PRQ7-1CL
- AN/GRC-242 UHF Base Station .... EE 150-WG-OMI-010
- CPE Operations and Maintenance .... NAVAIR 16-35CSEL-CPE-1
- JSRC Software .... EE 130-TA-OMI-010

4. Test Sets, Tools, and Test Equipment. NA

5. Repair Parts. Actual procurement of government spares and repair parts are initiated in accordance with the Supply Support Management Plan. The contractor will furnish spares and repair parts usage data to the Naval Inventory Control Point in Mechanicsburg, Pennsylvania. The Material Support Date (MSD) has been established as October 2004.

6. Human Systems Integration. The displays, controls, and work areas of the CSEL communications system are designed such that system functions and procedures allocated to system operators are at acceptable levels of workload and fatigue. Operation of the Radio Set is possible with a minimal expenditure of energy. It has optimized automatic features to facilitate one-handed operation by users that may be partially incapacitated.

K. SCHEDULES

1. Installation and Delivery Schedules. A total of 9,028 Radio Sets, 618 RSAs, and 618 CPCs will be procured by the Navy. The following schedule depicts the planned procurement of CSEL equipment for the Navy and Marine Corps.

CSEL PROCUREMENT SCHEDULE

EQUIPMENT	FY02	FY03	FY04	FY05	FY06	FY07
Radio Set	200	255	2260	2585	2708	1020
RSA	28	17	151	173	181	68
CPC	28	17	151	173	181	68

The CSEL procurement quantities shown in the above table will not provide CSEL capabilities to every Navy and Marine Corps aircrew member. As a result, Type Commanders (TYCOM) will determine which squadrons will employ CSEL and which squadrons will use the AN/PRC-112B Radio.

2. Ready For Operational Use Schedule. The Ready for Operational Use Schedule has not been determined. The TYCOMs will determine which squadrons will deploy with CSEL assets. Initial Operational Capability is currently planned for first quarter FY04.

3. Time Required to Install at Operational Sites. NA

4. Foreign Military Sales and Other Source Delivery Schedule. Delivery schedules for other United States Military Forces are available through the CSEL Program Office.

5. Training Device and Technical Training Equipment Delivery Schedule. CSEL user assets will be required for training at the various schools, ASTCs, and by AMSOs and Tiger Teams. Since it is not currently feasible to train with the Radio Set using the actual UHFSATCOM, UBS, and JSRCs, software that can be loaded on an operational radio is being developed to enable training in a simulated environment without the need to use of the satellite. The JPO is considering the development of a simulator that provides the Radio Set user with realistic communication capabilities.

L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
Operational Requirements Document	019-92-I-A	HQ ACC/XRSR	Approved 25 Oct 96

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/GRC-242 Radio Set Base Station NTSP	N6-NTSP-E-70-9902	PMW/PMA156	Approved Oct 99
GPS Integrated Logistics Support Plan for CSEL	NA	PMA202	Approved May 98
Aviation Life Support System (ALSS) NTSP	N88-NTSP A-50-9206A/D	PMA202	Draft Aug 01

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the Combat Survivor/Evader Locator and, therefore, are not included in Part II of this NTSP:

II.A.   Billet Requirements

II.A.1.a.   Operational and Fleet Support Activity Activation Schedule

II.A.1.b.   Billets Required for Operational and Fleet Support Activities

II.A.1.c.   Total Billets Required for Operational and Fleet Support Activities

II.A.2.a.   Operational and Fleet Support Activity Deactivation Schedule

II.A.2.b.   Billets to be Deleted in Operational and Fleet Support Activities

II.A.2.c.   Total Billets to be Deleted in Operational and Fleet Support Activities

II.A.3.   Training Activities Instructor and Support Billet Requirements

II.A.4.   Chargeable Student Billet Requirements

II.A.5.   Annual Incremental and Cumulative Billets

II.B.   Personnel Requirements

II.B.1.   Annual Training Input Requirements

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the Combat/Survivor Evader Locator and, therefore, are not included in Part III of this NTSP:

III.A.2.   Follow-on Training

     III.A.2.a. Existing Courses

     III.A.2.b. Planned Courses

     III.A.2.c. Unique Courses

III.A.3.   Existing Training Phased Out

PART III - TRAINING REQUIREMENTS

III.A.1. INITIAL TRAINING REQUIREMENTS

COURSE TITLE: CSEL Operation and Familiarization
COURSE DEVELOPER: Boeing
COURSE INSTRUCTOR: Boeing
COURSE LENGTH: 2 days
ACTIVITY DESTINATION: Various

		DATE	**STUDENTS**			
LOCATION, UIC		**BEGIN**	**OFF**	**ENL**	**CIV**	
Government Facility (TBD)	00000	7/1/02	5	5	2	INPUT
		(estimate)	0	0		AOB
			0	0		CHARGEABLE

COURSE TITLE: CSEL Radio Set Loading and Maintenance
COURSE DEVELOPER: Boeing
COURSE INSTRUCTOR: Boeing
COURSE LENGTH: 2 days
ACTIVITY DESTINATION: Various

		DATE	**STUDENTS**			
LOCATION, UIC		**BEGIN**	**OFF**	**ENL**	**CIV**	
Government Facility (TBD)	00000	7/1/02	5	5	2	INPUT
		(estimate)	0	0		AOB
			0	0		CHARGEABLE

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the Combat Survivor/Evader Locator, and, therefore, are not included in Part IV of this NTSP:

IV.A.   Training Hardware

   IV.A.2.   Training Devices

IV.B   Courseware Requirements

   IV.B.1.   Training Services

IV.C.   Facility Requirements

   IV.C.1.   Facility Requirements Summary (Space/Support) by Activity

   IV.C.2.   Facility Requirements Detailed by Activity and Course

   IV.C.3.   Facility Project Summary by Program

IV.A. TRAINING HARDWARE

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: CSEL Radio Set Operation and Use for Pilots
TRAINING ACTIVITY: Aviation Survival Training Center
LOCATION, UIC: NATTC Pensacola, 39869
                   NAS Norfolk, 39860
                   MCAS Cherry Point, 39861
                   NAS Patuxent River, 39859
                   NAS Jacksonville, 39862
                   Naval Station Oak Harbor, 39867
                   NAS Lemoore, 39866
                   NCAS Miramar, 39864

Each location will receive the number of assets listed below.

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
001	AN/PRQ-7 Radio Set	1	FY02	CFE	Pending
SPETE					
002	J-6431/PRQ-7 Radio Set Adapter	1	FY02	CFE	Pending
003	CSEL Planning Computer with Windows 95/98/NT	1	FY02	CFE	Pending
004	CSEL Battery Charger	1	FY02	CFE	Pending

CIN, COURSE TITLE: CSEL Radio Set Operation and Use for Pilots
TRAINING ACTIVITY: Aeromedical Safety Officer (AMSO)

Numbers of assets below represent total number allotted to AMSO and FAILSAFE Tiger Teams and the distribution of training assets will be determined by the TYCOMs.

LOCATION, UIC:

MAG 14, 09114	COMAEWWINGPAC, 55634
MAG 39, 09304	TRAWING 2, 09239
MAWTS-1, 55167	MAG 31, 09131
MAG 12, 09112	MARFORLANT, 67026
HELTACWINGLANT, 44890	MAG 16, 09116
NAVSTKAIRWARCEN, 39783	TRAWING 5, 52813
1st MAW, 57079	2nd MAW, 57080
MAG 29, 52844	MAG 11, 09233
STRKFIGHTWINGPAC, 09520	STRKFIGHTWINGLANT, 09103
FITWINGLANT, 09216	HQ USMC, 00264
COMNAVAIRLANT, 57012	SEACONWINGLANT, 52955
1st MAW AVN SPT ELM, Kaneohe Bay, 31947	PATWINGPAC, 09517
3rd MAW, 57081	4th MAW, XXXXX
TRAWING 6, 52814	MAG 36, 09136
MAG 26, 09506	NAVAEROMEDRSCHLAB, 66452
NAVOPMEDINST, 0751A	COMTRAWING 6, 52814
HMX-1, 55615	MAG 13, 57082
HSWINGPAC, 55636	VAQWINGPAC, 55627

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
001	AN/PRQ-7 Radio Set	50	FY02	CFE	Pending
SPETE					
002	J-6431/PRQ-7 Radio Set Adapter	4	FY02	CFE	Pending
003	CSEL Planning Computer with Windows 95/98/NT	4	FY02	CFE	Pending
004	CSEL Battery Charger	15	FY02	CFE	Pending

CIN, COURSE TITLE: C-602-2035, PR "A" School
TRAINING ACTIVITY: NATTC
LOCATION, UIC: NAS Pensacola, 63093

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
001	AN/PRQ-7 Radio Set	2	FY02	CFE	Pending
SPETE					
002	J-6431/PRQ-7 Radio Set Adapter	1	FY02	CFE	Pending
003	CSEL Planning Computer with Windows 95/98/NT	1	FY02	CFE	Pending
004	CSEL Battery Charger	1	FY02	CFE	Pending

CIN, COURSE TITLE: Land Survival
TRAINING ACTIVITY: NAVAVSCOLCOM
LOCATION, UIC: NAS Pensacola, 62229

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
001	AN/PRQ-7 Radio Set	2	FY02	CFE	Pending
SPETE					
002	J-6431/PRQ-7 Radio Set Adapter	1	FY02	CFE	Pending
003	CSEL Planning Computer with Windows 95/98/NT	1	FY02	CFE	Pending
004	CSEL Battery Charger	2	FY02	CFE	Pending

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: D-2D-0039, Survival Evasion Resistance Escape School
TRAINING ACTIVITY: FASOTRAGRU
LOCATION, UIC: NAS Brunswick, 0348A
                     NAS North Island, 09191

Number below represent total number of radios assigned to SERE School.

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
001	AN/PRQ-7 Radio Set	26	FY02	CFE	Pending
SPETE					
002	J-6431/PRQ-7 Radio Set Adapter	2	FY02	CFE	Pending
003	CSEL Planning Computer with Windows 95/98/NT	4	FY02	CFE	Pending
004	CSEL Battery Charger	4	FY02	CFE	Pending

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: CSEL Radio Set Operation and Use for Pilots
TRAINING ACTIVITY: Aviation Survival Training Center
LOCATION, UIC: NATTC Pensacola, 39869
                 NAS Norfolk, 39860
                 MCAS Cherry Point, 39861
                 NAS Patuxent River, 39859
                 NAS Jacksonville, 39862
                 Naval Station Oak Harbor, 39867
                 NAS Lemoore, 39866
                 NCAS Miramar, 39864

Each location will receive the number of assets listed below.

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
CSEL CD-ROM	1	FY02	Pending
CSEL Courseware with Instructor Guide	1	FY02	Pending
CSEL Wall Posters	1 set	FY02	Pending

CIN, COURSE TITLE: D-2D-0039, Survival Evasion Resistance Escape School
TRAINING ACTIVITY: FASOTRAGRU
LOCATION, UIC: NAS North Island, 09191
                 NAS Brunswick, 0348A

Each location will receive the quantity of assets listed below.

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
CSEL CD-ROM	1	FY02	Pending
CSEL Courseware with Instructor Guide	1	FY02	Pending
CSEL Wall Posters	1 set	FY02	Pending

CIN, COURSE TITLE: CSEL HHR Operation and Use
TRAINING ACTIVITY: Aeromedical Safety Officer (AMSO)
LOCATION, UIC:

MAG 14, 09114	COMAEWWINGPAC, 55634
MAG 39, 09304	TRAWING 2, 09239
MAWTS-1, 55167	MAG 31, 09131
MAG 12, 09112	MARFORLANT, 67026
HELTACWINGLANT, 44890	MAG 16, 09116
NAVSTKAIRWARCEN, 39783	TRAWING 5, 52813
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COMNAVAIRLANT, 57012	SEACONWINGLANT, 52955
1st MAW AVN SPT ELM Kaneohe Bay, 31947	PATWINGPAC, 09517
3rd MAW, 57081	4th MAW, XXXXX
TRAWING 6, 52814	MAG 36, 09136
MAG 26, 09506	NAVAEROMEDRSCHLAB, 66452
NAVOPMEDINST, 0751A	COMTRAWING 6, 52814
HMX-1, 55615	MAG 13, 57082
HSWINGPAC, 55636	VAQWINGPAC, 55627

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

Each location will receive the number of assets listed below.

TYPES OF MATERIAL OR AID	REQD	REQD	STATUS
CSEL CD-ROM	1	FY02	Pending
CSEL Courseware with Instructor Guide	1	FY02	Pending
CSEL Wall Posters	1 set	FY02	Pending

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: CSEL Radio Set Operation and Use for Pilots
TRAINING ACTIVITY: Aviation Survival Training Center
LOCATION, UIC: NATTC Pensacola, 39869
                     NAS Norfolk, 39860
                     MCAS Cherry Point, 39861
                     NAS Patuxent River, 39859
                     NAS Jacksonville, 39862
                     Naval Station Oak Harbor, 39867
                     NAS Lemoore, 39866
                     NCAS Miramar, 39864

Each location will receive the number of assets listed below.

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
EE 130-TA-OMI-010 JSRC Software Manual	Hard copy	2	FY02	Pending
EE 150-WG-OMI-010 AN/GRC-242 UHF Base Station Manual	Hard copy	2	FY02	Pending
NA 16-30PRQ-7-1CL AN/PRQ-7 Radio Set Operator's Check List	Hard copy	2	FY02	Pending
NA 16-30PRQ7-1 AN/PRQ-7 Radio Set Operator's Manual	Hard copy	2	FY02	Pending
NA 16-35CSEL-CPE-1 CPE Operations and Maintenance Manual	Hard copy	2	FY02	Pending

CIN, COURSE TITLE: D-2D-0039, Survival Evasion Resistance Escape School
TRAINING ACTIVITY: FASOTRAGRU
LOCATION, UIC: NAS North Island, 09191
                     NAS Brunswick, 0348A

Each location will receive the quantity of assets listed below.

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
EE 130-TA-OMI-010 JSRC Software Manual	Hard copy	2	FY02	Pending
EE 150-WG-OMI-010 AN/GRC-242 UHF Base Station Manual	Hard copy	2	FY02	Pending
NA 16-30PRQ-7-1CL AN/PRQ-7 Radio Set Operator's Check List	Hard copy	2	FY02	Pending
NA 16-30PRQ7-1 AN/PRQ-7 Radio Set Operator's Manual	Hard copy	2	FY02	Pending
NA 16-35CSEL-CPE-1 CPE Operations and Maintenance Manual	Hard copy	2	FY02	Pending

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: CSEL HHR Operation and Use
TRAINING ACTIVITY: Aeromedical Safety Officer (AMSO)
LOCATION, UIC:

MAG 14, 09114	COMAEWWINGPAC, 55634
MAG 39, 09304	TRAWING 2, 09239
MAWTS-1, 55167	MAG 31, 09131
MAG 12, 09112	MARFORLANT, 67026
HELTACWINGLANT, 44890	MAG 16, 09116
NAVSTKAIRWARCEN, 39783	TRAWING 5, 52813
1st MAW, 57079	2nd MAW, 57080
MAG 29, 52844	MAG 11, 09233
STRKFIGHTWINGPAC, 09520	STRKFIGHTWINGLANT, 09103
FITWINGLANT, 09216	HQ USMC, 00264
COMNAVAIRLANT, 57012	SEACONWINGLANT, 52955
1st MAW AVN SPT ELM Kaneohe Bay, 31947	PATWINGPAC, 09517
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NAVOPMEDINST, 0751A	COMTRAWING 6, 52814
HMX-1, 55615	MAG 13, 57082
HSWINGPAC, 55636	VAQWINGPAC, 55627

Each location will receive the number of assets listed below.

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
EE 130-TA-OMI-010 JSRC Software Manual	Hard copy	2	FY02	Pending
EE 150-WG-OMI-010 AN/GRC-242 UHF Base Station Manual	Hard copy	2	FY02	Pending
NA 16-30PRQ-7-1CL AN/PRQ-7 Radio Set Operator's Check List	Hard copy	2	FY02	Pending
NA 16-30PRQ7-1 AN/PRQ-7 Radio Set Operator's Manual	Hard copy	2	FY02	Pending
NA 16-35CSEL-CPE-1 CPE Operations and Maintenance Manual	Hard copy	2	FY02	Pending

CIN, COURSE TITLE: C-602-2035, PR "A" School
TRAINING ACTIVITY: NATTC Pensacola
LOCATION, UIC: NAS Pensacola, 63093

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
EE 130-TA-OMI-010 JSRC Software Manual	Hard copy	2	FY02	Pending
EE 150-WG-OMI-010 AN/GRC-242 UHF Base Station Manual	Hard copy	2	FY02	Pending
NA 16-30PRQ-7-1CL AN/PRQ-7 Radio Set Operator's Check List	Hard copy	2	FY02	Pending

IV.B.3. TECHNICAL MANUALS

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
NA 16-30PRQ7-1 AN/PRQ-7 Radio Set Operator's Manual	Hard copy	2	FY02	Pending
NA 16-35CSEL-CPE-1 CPE Operations and Maintenance Manual	Hard copy	2	FY02	Pending

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
DA	Awarded Initial Contract	FY96	Completed
DA	Published the GPS Integrated Logistics Support Plan (ILSP)	May 98	Completed
PDA	Performed Supportability Evaluation	Oct 99	Completed
DA	Published Initial NTSP	Aug 00	Completed
TSA	Published Draft NTSP	May 01	Completed
DA	Published Updated ILSP	Jun 01	Completed
DA	Began Operational Assessment	FY01	Completed
TSA	Began Initial Training	FY01	Completed
TSA	Approve NTSP	FY02	Pending
DA	Begin Fleet Introduction	FY02	Pending
OPTEVFOR	Begin Initial Operational Test and Evaluation	FY02	Pending
TSA	Deliver Initial TTE to Schoolhouses	FY02	Pending
DA	Attain Production and Deployment Phase of DAS	FY03	Pending
DA	Attain Initial Operational Capability	FY04	Pending
DA	Attain MSD	Oct 04	Pending

PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS

There are no Decision Items or Actions Required.

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS	
CAPT Owen Fletcher Deputy Aviation Maintenance Programs CNO, N781B fletcher.owen@hq.navy.mil	**COMM:** **DSN:** **FAX:**	(703) 604-7747 664-7747 (703) 604-6972
LCDR Theresa Melcher Resource Sponsor/Program Sponsor CNO, N780G4 melcher.theresa@hq.navy.mil	**COMM:** **DSN:** **FAX:**	(703) 697-2937 227-2937 (703) 695-7103
CAPT Terry Merritt Head, Aviation Technical Training Branch CNO, N789H merritt.terry@hq.navy.mil	**COMM:** **DSN:** **FAX:**	(703) 604-7730 664-7730 (703) 604-6939
AZCS Gary Greenlee NTSP Manager CNO, N789H1A greenlee.gary@hq.navy.mil	**COMM:** **DSN:** **FAX:**	(703) 604-7743 664-7743 (703) 604-6939
CDR Kevin Neary Aviation Manpower CNO, N122C1 n122c1@bupers.navy.mil	**COMM:** **DSN:** **FAX:**	(703) 695-3247 225-3247 (703) 614-5308
Mr. Robert Zweibel Training Technology Policy CNO, N795K zweilbel.robert@hq.navy.mil	**COMM:** **DSN:** **FAX:**	(703) 602-5151 332-5151 (703) 602-5175
LTCOL James Grace, USMC USMC Program Sponsor CMC, APW-71 gracejd@hqmc.usmc.mil	**COMM:** **DSN:** **FAX:**	(703) 614-1824 224-1824 (703) 614-2318
LTCOL Norman Albert, USAF CSEL Program Manager, USAF CMC, SMC/CZJ norman.albert@losangeles.af.mil	**COMM:** **DSN:** **FAX:**	(310) 363-6509 833-6509 (310) 363-3844
ATC Rick Paskoski Training Systems Manager NAVAIRSYSCOM, PMA205-3G1 paskoskira@navair.navy.mil	**COMM:** **DSN:** **FAX:**	(301) 757-8138 757-8138 (301) 757-6945
Mr. Bob Callow GPS Assistant Program Manager Logistics NAVAIRSYSCOM, AIR 3.1.4L callowrr@navair.navy.mil	**COMM:** **DSN:** **FAX:**	(301) 757-8090 757-8090 (301) 757-5331

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS	
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lopezb@spawar.navy.mil		
Ms. Cindy Sherwood	**COMM:**	(619) 524-7762
CSEL Assistant Program Manager Logistics	**DSN:**	524-7762
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cindys@spawar.navy.mil		
Ms. Kristin Stith	**COMM:**	(619) 524-7763
Assistant Program Manager Logistics	**DSN:**	524-7763
SPAWARSYSCOM, PMW/PMA156L	**FAX:**	(619) 524-3057
stithk@spawar.navy.mil		
Mr. Ken Avedision	**COMM:**	(619) 524-2089
UBS Logistics Manager	**DSN:**	524-2089
SPAWARSYSCOM, PMW/PMA156L	**FAX:**	(619) 524-2074
ave@spawar.navy.mil		
Mrs. Pollyanna Randol	**COMM:**	(757) 836-0103
Aviation NTSP Point of Contact	**DSN:**	836-0103
CINCLANTFLT, N-71	**FAX:**	(757) 836-6737
randolpa@clf.navy.mil		
Mr. Bob Long	**COMM:**	(808) 471-8513
Deputy Director for Training	**DSN:**	471-8513
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SUMMARY OF COMMENTS

ON THE

COMBAT SURVIVOR/EVADER LOCATOR

DRAFT NAVY TRAINING SYSTEM PLAN

OF AUGUST 2001

N88-NTSP-A-50-0018/D

Prepared by: ATC Aubrey Taylor, AIR 3.4.1
Contact at: (301) 757-3108
Date submitted: 30 October 2001

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

TABLE OF CONTENTS

ACTIVITIES PROVIDING COMMENTS:

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

ACTIVITY NAME: Chief of Naval Education and Training (N7)

COMMENT: Paragraph H.2.a

> Organizational Maintenance - There should be no O-level maintenance required by squadron avionic tech, i.e. 63XX. All O-level, ALSS/PR personnel should be allowed to do the required daily and turnaround inspections. This should be the only maintenance effort performed at the O-level. The mentioned 63XX (MOS) is an avionic tech, which is not trained to do the required maintenance, however, the I-level 64XX (MOS) is.

INCORPORATED: NO

REMARKS: Per the Global Positioning System (GPS) Integrated Logistics Support Plan (ILSP) for the Combat Survivor/Evader Locator (CSEL) dated April 2001, the maintenance concept for CSEL is identified as organizational level to depot level.

COMMENT: Paragraph H.2.b

> Intermediate level is listed as NA (not applicable). This should be the level at which maintenance is performed. It should be noted that I-level also has the same ALSS/PR rating.

INCORPORATED: NO

REMARKS: Per the Global Positioning System (GPS) Integrated Logistics Support Plan (ILSP) for the Combat Survivor/Evader Locator (CSEL) dated April 2001, the maintenance concept for CSEL is identified as organizational level to depot level.

COMMENT: Paragraph H.2.c

> Depot - Should read will accomplish all maintenance beyond intermediate level, instead of organizational level.

INCORPORATED: NO

REMARKS: Per the Global Positioning System (GPS) Integrated Logistics Support Plan (ILSP) for the Combat Survivor/Evader Locator (CSEL) dated April 2001, the maintenance concept for CSEL is identified as organizational level to depot level.

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

COMMENT: Paragraph H.3

Manning Concept - This states that ALSS/PR personnel will perform maintenance on the CSEL. This statement is inconsistent with the previous mentioned requirement in paragraph H.2.a on page 1-7.

INCORPORATED: YES

REMARKS: Generalized manning concepts.

COMMENT: Paragraph H.3.c.(2)

Maintenance - Marine Corps ALSS personnel are 6048, not 63XX.

INCORPORATED: YES

REMARKS: None

COMMENT: Paragraph H.4.b

Follow-on-training - CSEL should not be added to CIN C-100-2018. This should be taught to and performed by the intermediate level. Concur that it can be taught at the ALSS/PR courses.

INCORPORATED: NO

REMARKS: Per the Global Positioning System (GPS) Integrated Logistics Support Plan (ILSP) for the Combat Survivor/Evader Locator (CSEL) dated April 2001, the maintenance concept for CSEL is identified as organizational level to depot level.

COMMENT: Paragraph H.4.c

Student profiles - MOS should read 64XX not 63XX   Note: (63XX O-level)   (64XX I-level)

INCORPORATED: NO

REMARKS: Per the Global Positioning System (GPS) Integrated Logistics Support Plan (ILSP) for the Combat Survivor/Evader Locator (CSEL) dated April 2001, the maintenance concept for CSEL is identified as organizational level to depot level.

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

ACTIVITY NAME: Naval Air Systems Command, AIR 3.1.4I (PMW/PMA156 IPT)

COMMENT: This NTSP covers the CSEL HHR and CPE training requirements.

Where are the requirements listed for the JSRC training? Should this be addressed under a separate NTSP or covered under this NTSP?

INCORPORATED: NO

REMARKS: The JSRC is addressed in the Description of New Development section of this NTSP. The specific JSRC training should be addressed further in the UBS NTSP or in another form for NAVSEA.

COMMENT: Page I-5, paragraph G.1.c (2)(a)

This is the first time the reference HHR is mentioned. Explain that the reference HHR is not a separate special HHR but one that is selected from on site assets. Maybe the function of the reference HHR should be explained.

INCORPORATED: NO

REMARKS: The Reference HHR and Target HHR are explained in sufficient detail in the CPC publication. This NTSP provides basic descriptive information.

COMMENT: Page I-5, paragraph G.1.c.(2)(b)

"The CPC will host CSEL application software that allows an operator to control the operation of the RSA." The CPC does not control the operation of the RSA. The RSA is a feed through device (adapter) that connects the CPC to the HHR.

INCORPORATED: YES

REMARKS: Verbiage corrected.

COMMENT: Page I-6, paragraph G.2.b

"The HHR consists of... ...and Liquid Crystal Display". The HHR comes with an earphone, strap and pouch that are attached and a main battery. The HHR has physical characteristics such as an earphone jack, keypad, volume control... ...and Liquid Crystal Display.

INCORPORATED: YES

REMARKS: Verbiage corrected.

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

COMMENT: Page I-6, paragraph G.5

Do we want to include the DALS capability as a future growth item?

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-12, paragraph I. 1

This paragraph only addresses the aircrew personnel. Should the people who load and maintain the HHR (ALSS, etc.) be mentioned?

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-14, paragraph K.2.

IOC will occur in the first quarter of FY04.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-2, paragraph IV.A.

AMSO, FAILSAFE, A School, NOMI, and NAVAVSCLOCOM will be provided assets as Technical Training Equipment (TTE). The TTE that they will be receiving should be listed. It cannot be determine from this section what training TTE they will be receiving. Not all of the TTE hardware requirements are listed (rechargeable batteries, battery chargers, etc.).

INCORPORATED: YES

REMARKS: Part IV data updated with current information.

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

ACTIVITY NAME: Naval Air Systems Command (PMA2052E)

COMMENT: Page i, third paragraph

Change to read. "Personnel for building load files and actually loading the CSEL radio sets will vary depending on the specific community and their operational capabilities. Personnel identified to perform this include Pilots, NFOs, AWs, ATs, PRs, RMs, Marine Avionics and Aviation Life Support (ALSS) personnel, and squadron/unit qualified COMSEC Personnel."

INCORPORATED: YES

REMARKS: Incorporated with minor modifications to meet standard NTSP formatting.

COMMENT: Page i, after the third paragraph

Insert "Navy and Marine ALSS personnel will perform organizational level maintenance of the radio set."

INCORPORATED: YES

REMARKS: Replaced "Marine" with "Marine Corps" to match rest of document.

COMMENT: Page i, fourth paragraph

Change to read "CSEL training will consist of several methods and mediums, and may include formal courses, Computer-Based Training (CBT), videos, and On-the-Job (OJT) Training. Fleet Air Introduction Liaison Survival Aircrew Flight Equipment Tiger Teams will introduce CSEL to Navy and Marine Corp units and local Aero Medical Safety Officers (AMSO) will provide refresher and pre-deployment training. Follow-on training for aircrew personnel will be provided during basic flight training at the Aviation Survival Training Center (ASTC), and during Survival, Evasion, Resistance, and Escape (SERE) training. Follow-on training for maintenance personnel will be accomplished by adding CSEL information to the existing Class A1 school for the PR rating. Follow-on training for personnel building load sets and loading the radio sets will accomplished through OJT reinforced with CBT."

INCORPORATED: YES

REMARKS: Incorporated with minor modifications to meet standard NTSP formatting.

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

COMMENT: Page v, IOT&E

Remove IOT&E and replace with MOT&E

INCORPORATED: YES

REMARKS: MOT&E moved to appropriate order in list.

COMMENT: Page vii, second paragraph, last sentence

Remove sentence.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-2, second paragraph of D.1, second sentence

Change "…CSEL will be employed by Navy and Marine Corps Special Forces…" to "…Navy and Marine Corps Special Forces will employ CSEL."

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-2, paragraph E., third sentence

Change IOT&E to MOT&E.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-2, paragraph F

Remove "(CSEL Radio)."

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-4, paragraph G.1.a

Apply a space between UHF and SATCOM in all occurrences.

INCORPORATED: YES

REMARKS: None

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

COMMENT: Page I-4, paragraph G.1.b

Change both occurrences of receipt to reception.

INCORPORATED: YES

REMARKS: None

COMMENT: Entire Document

Change Radio Set to HHR in all occurrences noted.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-5, paragraphs G.1.c.(2) and G.1.c.(2)(b)

Change heading to acronym form.

INCORPORATED: NO

REMARKS: NTSP standard formatting discourages use of acronyms in headings.

COMMENT: Page I-6, paragraph G.2.b

Change weigh to weighs.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-6, paragraph G.2.d

Use CSEL acronym in header. Change sentence to read "The CPC will be a ruggedized International Business Machine-compatible computer with the following minimum specifications: a processor speed of 100 megahertz, 32 megabytes of Random Access Memory, a 100 megabyte hard disk drive, a 16x CD-ROM drive, a 3.5" floppy disk drive, a single universal serial bus (USB) port, a Variable Gain Amplitude monitor, a standard 101 keyboard, and utilize Windows 2000 or current equivalent operating system.

INCORPORATED: YES

REMARKS: CSEL acronym not used in header. NTSP standard formatting discourages use of acronyms in headings.

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
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COMMENT: Page I-6, paragraph G.4

Use CSEL acronym in header of paragraph.

INCORPORATED: NO

REMARKS: NTSP standard formatting discourages use of acronyms in headings.

COMMENT: Page I-7, paragraph G.4.b

Change last sentence to read "If the HHR is zeroized a second time, it will provide Amplitude Modulation voice communication on factory-set frequencies and have course acquisition code GPS capabilities.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-7, paragraph H.1, first sentence

Change to read, "At the squadron level, the CSEL operational concept will employ two groups."

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-7, paragraph H.1, last sentence

Strike "organizational maintenance" and replace with "officer and"

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-7, paragraph H.2.a

Change to read "Organizational level maintenance will be performed by Navy personnel with the Navy Enlisted Classification (NEC) 83XX in the ALSS (PR) rating and Marine Corps personnel with Military Occupational Specialty (MOS) 63XX working in the ALSS Division.

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
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COMMENT: Page I-7, paragraph H.2.a.(1)

Add acronym BIT to first sentence. Add "There are two levels of BIT: internal BIT on the HHR and more comprehensive BIT utilizing the CPE" as second sentence. In the last sentence strike "main and backup batteries" and replace with battery.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-7, paragraph, H.2.c, first sentence

Change to read "For the HHR and RSA, Boeing North American (BNA) will accomplish all maintenance beyond the organizational level.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-8, paragraph H.3, second sentence

Change "…officer…" to "…Navy and Marine Corps pilots, NFOs,"

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-8, paragraph H.3, third and fourth sentences

Change to read "Operators of the CPE will include officer and enlisted personnel." Add the following sentence after 3, "Enlisted ALSS personnel will perform maintenance of the HHR and CPE."

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
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COMMENT: Page I-8, paragraph H.3.c.(2)

Change to read "Maintenance of the HHR will be performed by ALSS personnel with
NEC 83XX and Marine Corps personnel with MOS 63XX. Maintenance of the CPC will
be performed by squadron/unit Information Technology (IT) personnel. Maintenance of
the RSA will be performed by AT personnel with NEC 83XX and Marine MOS 63XX.
Based on a manpower analysis, the ALSS, IT, and Avionics Divisions will be able to
maintain the equipment without an increase in manpower."

INCORPORATED: YES

REMARKS: Added "Corps personnel" after "Marine" in the third sentence.

COMMENT: Page I-9, second paragraph of H.3.c.(2)

First sentence change "Avionics Division" to "CMS custodian." Delete last sentence.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-9, third paragraph of H.3.c.(2)

Change to read, "The procedure for loading the HHR involves obtaining a GPS fix on a
HHR to be designated as the reference HHR. The CPC and GPS key fill device are
connected to the RSA. The reference HHR and a target HHR are set into the RSA. The
person performing the loading function must also enter mission and personal data into the
CPC through the keyboard.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-9, third paragraph of H.3.c.(2)

Change to read, "Since the CPC will be used to load classified data it will require a secure
area for use and storage. The HHR is classified to the level of the waypoints entered as
these are the only items retrievable by an operator."

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
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COMMENT: Page I-9, paragraph H.3.c.(2), last sentence

In the last sentence change "should" to "may not".

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-9, first paragraph of H.4, last sentence

Delete "…using CSEL equipment…"

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-10, paragraph H.4.a

Change "IOT&E" to "MOT&E." Compress "Aeromedical Safety Officer" and "Fleet Air Introduction Liaison Survival Aircrew Flight Equipment."

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-11, second paragraph of H.4.a

First sentence, remove "IMI training" and add "demonstration". Second sentence, remove "training". Third sentence, change to read "The Tiger Team will provide this introduction to Fleet squadrons as they receive their CSEL assets, to the ASTCs for follow-on physiology training, AMSOs for pre-deployment training, and to the SERE training activities."

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-11, paragraph H.4.b.(1), second sentence

Delete "FAILSAFE personnel or by." Add three course descriptions after paragraph.

INCORPORATED: YES

REMARKS: None

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

COMMENT: Paragraph K.1.(2)

DATMs, change word after FREST from "squadrons" to "sites."

INCORPORATED: YES

REMARKS: FRESTs are now called NAMTRA MARUNITs

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

ACTIVITY NAME: Space and Naval Warfare Systems Command (PMW/PMA156 IPT)

COMMENT: General

   This NTSP covers the CSEL HHR and CPE training requirements. Where are the requirements listed for JSRC training? Should this be addressed under a separate NTSP or covered under this NTSP?

INCORPORATED: NO

REMARKS: The JSRC is addressed in the Description of New Development section of this NTSP. The specific JSRC training should be addressed further in the UBS NTSP or in another form for NAVSEA.

COMMENT: Global change

   There should be a slash (/) between Survivor and Evader to agree with JPO designation.

INCORPORATED: YES

REMARKS: None

COMMENT: Page i

   Acronyms should be called out on this page - GPS, JSRC

INCORPORATED: NO

REMARKS: NTSP formatting discourages the use of acronyms for whole words not repeated in the document. The Executive Summary is treated as a separate document.

COMMENT: Page i

   Add (AW) and (AT) after ratings.

INCORPORATED: NO

REMARKS: NTSP formatting discourages the use of acronyms for whole words not repeated in the document. The Executive Summary is treated as a separate document.

COMMENT: Page i

   Radioman is now Information Systems Technician (IT).

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

COMMENT: Page i

Add acronym "SERE."

INCORPORATED: NO

REMARKS: NTSP formatting discourages the use of acronyms for whole words not repeated in the document. The Executive Summary is treated as a separate document.

COMMENT: Page iii

Add AW to list.

INCORPORATED: NO

REMARKS: The reference to Aviation Warfare System Operators is not used in this NTSP.

COMMENT: Page v

Add PMW-SPAWAR Program Manager, Warfare

INCORPORATED: YES

REMARKS: None

COMMENT: Page vi, Preface

Indicates that this document is an update to an initial NTSP. CSEL NTSP had been rejected on previous submissions, therefore this is still an initial NTSP, not an update.

INCORPORATED: NO

REMARKS: This NTSP is currently a Draft version being developed into the Proposed stage.

COMMENT: Page I-1, paragraph C

Change SPAWAR Code to PMW/PMA156.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-2, paragraph D.1

If GPS and JSRC acronyms are added to Page i (above), then they should not be spelled out in the rest of the document. OTH defined on Page I - only acronym is needed here.

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

INCORPORATED: NO

REMARKS: NTSP formatting discourages the use of acronyms for whole words not repeated in the document. The Executive Summary is treated as a separate document.

COMMENT: Page I-2, paragraph D.1

Second paragraph, add reference to Figure I-1 to depict User Segment.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-2, paragraph D.1

Disagree with arbitrary limitation to excluding Special Forces. The CSEL program now has two separate NTSPs, one for the HHR and one for the UBS. Developing a third NTSP to address Special Forces is not cost effective when this HHR NTSP should cover all Navy/MC uses of the HHR.

INCORPORATED: YES

REMARKS: Special Forces statements included.

COMMENT: Page I-4, paragraph G.1.A

UBS defined twice in this paragraph.

INCORPORATED: NO

REMARKS: UBS is defined for clarity and consistency throughout the NTSP.

COMMENT: Page I-4, paragraph G.1.a.(2), second line

200 HHR users has been reduced.

INCORPORATED: NO

REMARKS: Changed verbiage to read expected to.... and up to....

COMMENT: Page I-4, paragraph G.1.a.(2), seventh line

UBS consists of three racks of equipment.

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN

COMMENT: Page I-5, paragraph G.1.b.(1)

If "Tactical Receive Equipment" used elsewhere, the acronym (TRE) is required.

INCORPORATED: NO

REMARKS: Tactical Receive Equipment is not repeated in the NTSP.

COMMENT: Page I-5, paragraph G.1.c(2)(a)

This is the first time the reference HHR is mentioned. Explain that the reference HHR is not a separate special HHR but one that is selected from on site assets. Maybe the function of the reference HHR should be explained.

INCORPORATED: NO

REMARKS: The Reference HHR and Target HHR are explained in sufficient detail in the CPC publication. This NTSP provides basic descriptive information.

COMMENT: Page I-5, paragraph G.1.c.(2).(b)

The UBS (three racks) exceeds the 22.5 inch width called out here. Also The CPC does not control the operation of the RSA. The RSA is a feed through device (adapter) that connects the CPC to the HHR.

INCORPORATED: NO

REMARKS: Corrected verbiage to indicate each UBS width. RSA verbiage corrected.

COMMENT: Page I-6, paragraph G.2.b

"The HHR consists of... ...and Liquid Crystal Display." The HHR comes with an earphone, strap and pouch that are attached and a main battery. The HHR has physical characteristics such as an earphone, jack, keypad, volume control... ...and Liquid Crystal Display.

INCORPORATED: YES

REMARKS: Verbiage corrected.

COMMENT: Page I-6, paragraph G.4.a

First use of term, "S/E"--Should be spelled out.

INCORPORATED: NO

REMARKS: Survivor/Evader is first used on page I-2.

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

COMMENT: Page I-6, paragraph G.5

Do we want to include DALS capability as future growth item?

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-8, paragraph H.3

"Perform maintenance" should be explained as being very limited.

INCORPORATED: NO

REMARKS: Limitations on maintenance are explained on page I-7, paragraph H.2.a.(1).

COMMENT: Page I-8, paragraph H.3.c.(2)

Third line - If "IT" refers to the Navy rating then it should be "Information Systems Technician."

INCORPORATED: NO

REMARKS: Verbiage generalized. Numerous rating personnel will perform maintenance.

COMMENT: Page I-8, fourth line.

AT was spelled out earlier, so only acronym is required here.

INCORPORATED: NO

REMARKS: Verbiage generalized.

COMMENT: Page I-9, paragraph H.4, sixth line

OJT has been spelled out previously.

INCORPORATED: NO

REMARKS: First use of the term OJT occurs on this page. The Executive Summary is treated as a separate document.

COMMENT: Page I-9, paragraph H.4.a

Heading for location, "Test Site" needs clarification. Two places.

**COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
DRAFT NAVY TRAINING SYSTEM PLAN**

INCORPORATED: YES

REMARKS: Verbiage changed to TBD. It is unknown at which sites training will be conducted.

COMMENT: Page I-10, paragraph H.4.b

ASTC and AMSO not spelled out previously.

INCORPORATED: NO

REMARKS: ASTC is first used on page I-9. AMSO is first used on page I-2.

COMMENT: Page I-11, paragraph (2)d

Add to end of sentence "…User Segment Equipment."

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-12, paragraph I.1

This paragraph only addresses the aircrew personnel. Should the people who load and maintain the HHR (ALSS, etc.) be mentioned?

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-13, paragraph J.1

Boeing no longer uses the "Autonetics…Division" title.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-14, paragraph K.2

IOC will occur in the first quarter of FY04.

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
COMBAT SURVIVOR/EVADER LOCATOR
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COMMENT: Page I-14, paragraph K.5

Add "…the JPO is considering…" vice "…consideration should be given to …".

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-15, paragraph M

PDA Code for AN/GRC-242 NTSP is now PMW/PMA156.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-1

Statement says IV.A. is not included, but IV.A.1 runs from Page IV-2 to Page IV-16.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-2, element IV.A

This section could be reduced considerably by developing a matrix format.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-2, element IV.A

AMSO, FAILSAFE, A School, NOMI, and NAVAVSCOLCOM will be provided assets as Technical Training Equipment (TTE). The TTE that they will be receiving should be listed. It cannot be determined from this section what training TTE they will be receiving. Not all of the TTE hardware requirements are listed (rechargeable batteries, battery chargers, etc.)

INCORPORATED: YES

REMARKS: None

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COMMENT: Page IV-17, element IV.B.2

Same comment as for IV.A.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-26, element IV.B.3

Same comment as for IV.A.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-35

Pagination on pages IV-35, 39, 45, and VI-1 need to be fixed.

INCORPORATED: YES

REMARKS: None

COMMENT: Page IV-45

Single line orphan should be on Page IV-44.

INCORPORATED: YES

REMARKS: None

COMMENT: Page VII-1, POC List.

Ms. Kristin Stith is PMW/PMA156L.

INCORPORATED: YES

REMARKS: None

COMMENT: Page VII-1

Add Ken Avedisian as Logistics Manager for UBS; SSC, SD, 2315;
ave@spawar.navy.mil, Phone (619) 524-2089; DSN 524-2089; Fax (619) 524-2074.

INCORPORATED: YES

REMARKS: None

COMMENTS / RECOMMENDATIONS ON THE
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ACTIVITY NAME: Naval Special Warfare Command (N61A)

COMMENT: Page i, Change the following to read:

Personnel required to build load files and actually load the CSEL will vary, depending on the specific community and their operational capabilities. Personnel identified to perform this include Pilots, Naval Flight Officers, Aviation Warfare Systems Operators, Aviation Electronic Technicians, Aircrew Survival Equipmentmen (PRs), Information System Technicians (ITs), Naval Special Warfare (NSW) SEALs, Electronic Technicians (ETs), Marine avionics and Aviation Life Support (ALSS) personnel, and squadron or unit qualified Communication Security personnel.

Navy and Marine Corp ALSS and NSW Communication Support personnel will perform organizational level maintenance of the CSEL.

CSEL training will consist of several methods and media, and may include formal courses, Computer-Based Training (CBT), videos, and On-the-Job Training (OJT). Fleet Air Introduction Liaison Survival Aircrew Flight Equipment (FAILSAFE) Tiger Teams will introduce CSEL to Navy, Marine Corps, and NSW units, and local Aeromedical Safety Officers (AMSOs) will provide refresher and pre-deployment training. Follow-on training for aircrew personnel will be provided during basic flight training at the Aviation Survival Training Centers, and during Survival, Evasion, Resistance, and Escape training. Follow-on training for maintenance personnel will be accomplished by adding CSEL information to *C-602-2035, Aircrew Survival Equipment Common Core Class A1*, which is the existing Class A1 school for the PR rating. Follow-on training for NSW operators and support personnel will be accomplished

INCORPORATED: YES

REMARKS: Incorporated with minor modifications to meet standard NTSP formatting.

COMMENT: Page ii, Change to read:

"...through the Advanced Communications Course resident at CNSWG-1 (San Diego, California) and CNSWG-2 (Little Creek, Virginia). Follow-on training for personnel building load sets and loading the radio sets will be accomplished through OJT-reinforced CBT.

INCORPORATED: YES

REMARKS: None

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COMMENT: List of acronyms, add the following:

CSAR............ Combat Search And Rescue
DISN............. Defense Information System Network
ET................. Electronic Technician
IT.................. Information Systems Technician
LPI/D .... Low Probability of Intercept/Detection
NSW .... Naval Special Warfare
SEAL .... Sea Air Land

INCORPORATED: YES

REMARKS: Not all acronyms were incorporated. NTSP formatting discourages the use of acronyms for whole words not repeated in the document.

COMMENT: Preface, Change to read:

This Proposed NTSP also includes comments from the Naval Air Systems Command (PMA205-2E and PMA205-5C, Naval Air Maintenance Training Group Detachment, Maintenance Training Unit 3003, and Naval Special Warfare Command. The vast majority of comments are only verbiage changes in Part I for clarity.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-2, Change the following to read:

1. Operational Uses. CSEL is an emergency survival communication system that will provide United States military forces with secure, two-way communication for personnel in a Survivor/Evader (S/E) scenario. CSEL is capable of near real-time communications with a Low Probability of Interception/Detection functionality and will additionally provide precise Global Positioning System (GPS) and navigation data, two-way Over-The-Horizon (OTH) secure data communication to Joint Search and Rescue Centers (JSRC), OTH Beacon, and Line-Of-Sight (LOS) voice communications. This will enhance the Combat Search and Rescue (CSAR) response capabilities to locate and communicate with isolated personnel, independent of their location or circumstances.

This NTSP focuses on the User Segment of the CSEL as it applies to Navy and Marine Corps combat aircrew and NSW operators and support personnel usage.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. Operational Assessment (OA) was completed in February 2001. OA was conducted by the Air Force Operational Test and Evaluation Center and by the Navy Operational Test and Evaluation Force.

Multi-Service Operational Test and Evaluation (MOT&E) is scheduled to begin in fourth quarter Fiscal Year (FY) 02. Believe there were various "phases" of OA. Which one was completed in February 2001. Also, would expound on DT/OT and how OA's support meeting satisfactory results of a DT or OT.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. In combat situations and possible S/E scenarios, the AN/PRQ-7 Radio Set will be employed instead of the AN/PRC-112B Radio Set currently used in the fleet. (This doesn't make sense. If the PRQ-7 is the replacement for the PRC-112 system then so state but caveat sentence with "as systems become available and PRC-112 is transitioned out of current fleet inventories, the PRQ-7 will be the emergency communication system of choice," or to that end.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-4, Change to read:

(1) Satellite Communication. The UHF SATCOM mode will support two-way messaging, which includes geoposition information between a UBS and an S/E's AN/PRQ-7 Radio Set through an allocated UHF SATCOM channel. The National Assets will support one-way messaging, including geoposition information from the Radio Set using the Low Probability of Exploitation (a.k.a. LPI/D) National Assets waveform. This supplements UHF SATCOM in areas of high intercept threat where National Assets coverage is likely to be provided. AN/PRQ-7 Radio Set National Assets transmissions are acknowledged by the JSRC via the UBS and UHF SATCOM satellite. The SARSAT operates over the international Cosmicheskya Systemya Poiska Avararihich Sudov ((COSPAS), a.k.a. "Space System for the Detection of Vessels in Distress")-SARSAT system and is intended for emergency coverage above 70° latitude where UHF SATCOM and National Assets coverage is marginal, as well as backup coverage through the civil Search And Rescue (SAR) system.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-5, Change the following to read:

JSRCs are equipped with Defense Information Infrastructure - Common Operating Environment (DII-COE) work stations through which the CSEL application can operate simultaneously with other functions. In some cases, a JSRC workstation may be directly interfaced to Tactical Receive Equipment, which provides direct access to the National Assets messages without having to wait for the UBS to retransmit the information over the GDN.

(2) Ground Dissemination Network. The GDN provides a highly reliable and timely global connection between all CSEL ground elements by utilizing the existing Defense Information System Network (DISN) with DII COE compatible protocols.

(1) AN/PRQ-7 Radio Set. The HHR provides limited data communication for all OTH modes, SAR aircraft-compatible LOS voice communication, COSPAS-SARSAT 406-megahertz beacon, and precise geopositioning to the user. The HHR is designed for one-handed operation (right or left) with flight gloves or modified winter gloves. Once the HHR is activated, it may be polled by the JSRC workstation without further action.

(2) Combat Survivor Evader Locator Planning Equipment

(a) J-6431/PRQ-7 Radio Set Adapter. The RSA serves as the interface between the CPC and the reference HHR and interfaces the reference HHR with the target HHR. This is how data is transferred from the reference to as many HHRs that are going to be used during the operation. The reference HHR stays resident in the RSA, while the target HHRs are loaded one after another. The RSA performs such functions as commanded by the CPC, which include: loading mission parameters and precision GPS time, and interfacing the Radio Set to the GPS key fill device. The RSA is portable, has a standard zero case design, and uses a universal Alternating Current (AC) power supply. The RSA provides power to the HHR during loading.

INCORPORATED: YES

REMARKS: Not all acronyms were incorporated. NTSP formatting discourages the use of acronyms for whole words not repeated in the document.

COMMENT: Page I-6 and I-7, Change to following to read:

b. AN/PRQ-7 Radio Set. The HHR will be able to withstand saltwater immersion and the shock, vibration, and Gravity (G)-force associated with operator emergency egress and personnel recovery operations. The HHR will be designed to fit into all current survival vests, rucksacks, and ejection seat packs, as it is a fit, form, and function replacement for the AN/PRC-112. It will measure 7.8 inches high, 3.2 inches wide, and 1.6 inches deep, and weighs 31.8 ounces.

d. Combat Survivor Evader Locator Planning Computer. The CPC will be a ruggedized International Business Machine (IBM)-compatible computer with the following minimum specifications: a processor speed of 100 megahertz, 32 megabytes of Random Access Memory (RAM), a 100 megabyte hard disk drive, a 16x Compact Disk-Read Only Memory (CD-ROM) drive, a 3.5" floppy disk drive, a single Universal Serial Bus (USB) port, a Variable Gain Amplitude (VGA) monitor, a standard 101 keyboard, and utilize Windows 2000 or current equivalent operating system.

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Communications Security. The HHR will incorporate National Security Agency (NSA) approved Communications Security techniques to protect the unit against extraction of crypto keys. A NSA endorsed encryption algorithm will be used to protect UHFSATCOM and National Assets transmissions. A zeroizer feature will be included to permit the user to purge volatile memory. There will be two levels of zeroization available to the user. When the HHR is zeroized once, the user may continue to use the Radio Set; however, the JSRC operator will be alerted that the HHR may be in hostile hands and must re-authenticate the user's identification. When the HHR is zeroized a second time, it will provide Amplitude Modulation (AM) voice communication on factory-set (default) frequencies and be reduced to course acquisition code GPS capabilities.

H. CONCEPTS

1. Operational Concept. At the operator level, the CSEL operational concept will employ two groups. Navy and Marine Corps aviators [i.e., Pilots, Naval Flight Officers (NFO), and enlisted aircrew] and NSW operators (SEALs) who will operate the Radio Set in an S/E environment. Navy and Marine Corps officer and enlisted personnel and NSW communication support personnel will operate the CPE to load mission critical data into the HHR.

2. Maintenance Concept

a. Organizational. Organizational level maintenance will be performed by Navy personnel with Navy Enlisted Classification (NEC) 83XX in the Aviation Life Support Systems (ALSS) Aircrew Survival Equipmentman (PR) rating , IT 23XX, ET 14XX, and 5326 (Navy SEALs) and Marine Corps personnel with Military Occupational Specialty (MOS) 63XX working in the ALSS Division.

(1) AN/PRQ-7 HHR. Preventive Maintenance (PM) is limited to performing self-test using Built-In Test (BIT). There are two levels of BIT: internal BIT on the HHR and a more comprehensive BIT using the CPE. Corrective Maintenance (CM) is limited to replacing the battery and possibly replacing the UHF/Very High Frequency antenna.

(2) Combat Survivor Evader Locator Planning Equipment. PM is limited to operational checkout and periodic inspections and cleaning. CM includes troubleshooting to fault-isolate to a particular equipment item or cable, and on-equipment repair by removal and replacement procedures.

b. Intermediate. Not Applicable (NA)

c. Depot. For the HHR and RSA: <u>Boeing North American (BNA) will accomplish "ALL" maintenance beyond the organizational level</u>. The HHR will be under a ten-

year warranty. The RSA will be covered by a maintenance agreement between the government and BNA.

INCORPORATED: YES

REMARKS: None

COMMENT: Pages I-8 and I-9, Change the following to read:

      d. Interim Maintenance. Currently, there is no plan for interim maintenance for the Radio Set and CPE. If interim maintenance requirements are identified, it will be under the cognizance of the United States Air Force (USAF).

    3. Manning Concept. The manpower requirements for CSEL will consist of operators and maintainers. Operators of the HHR will include Navy and Marine Corps Pilots, NFOs, NSW SEALs, and enlisted aircrew. Operators of the CPE will include Naval and Marine Corps officer and enlisted personnel. Enlisted ALSS personnel and NSW communication support personnel will perform maintenance of the HHR and CPE. An analysis of the operation and maintenance functions associated with these CSEL components indicates these tasks are within the capabilities of existing Navy Officer Billet Code, Navy Enlisted Occupational Standards (ratings), and Marine Corps MOS structures.

      b. Proposed Utilization. At FOC, the AN/PRQ-7 HHR will be used by all tactical operational forces (pilots/aircrew/NSW SEALs and supporting crews/USMC) going forward into combat with the probability of being in a S/E situation.

      c. Recommended Qualitative and Quantitative Manpower Requirements

        (1) Aircrew. Aircrew manpower requirements are determined by the seat factor and crew ratio listed in the appropriate Required Operational Capability and Projected Operational Environment documents. Since CSEL will not impact these factors, current aircrew requirements will not change as a result of the introduction of CSEL.

        (2) NSW Forces. NSW 5326 SEAL personnel will operate the HHR. Since CSEL will not impact any operational factors, current manning requirements will not change as a result of the introduction of CSEL.

        (3) Maintenance. Maintenance of the HHR will be performed by ALSS personnel with NEC 83XX, NSW support personnel with NEC IT 23XX, ET 14XX and 5326 (SEAL) and Marine Corps personnel with MOS 63XX. Maintenance of the CPC will be performed by squadron or unit Information Technology (IT) personnel. Maintenance of the RSA will be performed by Aviation Electronics Technician (AT) personnel with NEC 83XX , NSW

personnel with ET 14XX, and Marine Corps personnel with MOS 63XX. Based on a manpower analysis, the ALSS, IT, NSW communications support technicians and Avionics Divisions will be able to maintain the equipment without an increase in manpower.

The data to be loaded into the HHR is obtained from the Operations Department, Communications Department and CMS Custodian, and includes communication frequencies, waypoints, call signs, GPS keys, and user information. Since some of this data is classified, personnel tasked to load the HHR will require a <u>Secret security clearance</u>.

The ALSS Work Center uses the Survival Equipment Asset Tracking System (SEATS) to track the AN/PRC-112Bs and will add CSEL Radio Sets to SEATS. (If the HHR is categorized as 'CCI', then the CMS tracking system now used to support DCMS assets will be required and reportable through that system.) This holds true for any Navy command.

It takes approximately eleven minutes to set up the CPE and load one HHR. Each successive HHR takes approximately two to three minutes. The total man-hours expended on a daily basis loading HHR will vary for each type of unit, depending on the number of operators and the operations schedule. Based on a manpower analysis, existing manning levels may not be adequate.

4. Training Concept. The CSEL training concept will be similar to other Navy survival equipment in that Pilots, NFOs, enlisted aircrew, SEALs must become familiar with the HHR as soon and as often as possible. This familiarization will be in the form of HHR training at basic Pilot and NFO schools (Fleet Readiness Squadrons), at the Aviation Survival Training Centers (ASTC), during Survival, Evasion, Resistance, and Escape (SERE) training and NSW Advanced Operator (SEAL) and Communication Courses.

(1) Initial Training. CSEL initial training was provided for personnel who participated in OA, and will be provided for personnel participating in MOT&E. Other personnel requiring CSEL initial training include Aeromedical Safety Officer (AMSO) and Fleet Air Introduction Liaison Survival Aircrew Flight Equipment (FAILSAFE) personnel. Does this mean after the CSEL is fielded or during the DT/OT phase. If it means after CSEL is fielded then the FAILSAFE personnel would be the team to "train the trainer" within NSW at each Naval Special Warfare Group site (CNSWG-1 in San Diego (NAB Coronado) and CNSWG-2 in Norfolk (NAB Little Creek). Once an ample cadre of operators/instructors/trainers are trained, the follow-on training criteria would be required. If further training is necessary, due to circumstances beyond scheduled control, would FAILSAFE team be available to assist??

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Title .... **CSEL Operation and Familiarization**

Description .... This course provides training to Pilots, NFOs, and enlisted aircrewman, NSW SEALs and support personnel including:

- ° CSEL Capabilities, Limitations, and Operation
- ° Radio Set Functions and Operation

Upon completion, the student will be able to employ the CSEL system during S/E situations.

Title .... **CSEL Radio Set Loading and Maintenance**

Description .... This course provides training to the organizational level maintenance technician, including:

- ° CPC Setup and Operation
- ° RSA Setup and Operation
- ° Radio Set Loading and Maintenance Procedures

Upon completion, the student will be able to properly configure the CPC and RSA, load the HHR with mission data, and perform the required maintenance actions in a organizational level environment under limited supervision.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-11, Change the following to read:

......operation and maintenance, HHR loading and maintenance, and battery conservation. The Tiger Teams will provide this introduction to Fleet squadrons as they receive their CSEL assets, to the ASTCs for follow-on physiology training, AMSOs for pre-deployment training, to the SERE training activities and NSW Group training and operational facilities.

a. Follow-on Training

Aircrew. Navy and Marine Corps personnel will receive instruction on the functions and proper use of the HHR at basic Pilot and NFO schools, at the ASTCs, and during SERE training. Refresher training will be provided by local AMSOs prior to deployments. The following is a list of training sites and courses identified to perform CSEL training. This list may not be all inclusive, but will be updated as further information regarding courses into which CSEL will be incorporated becomes available.

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(1) NSW SEAL operators and support personnel. (If these courses are open to all Naval personnel, then possibly we could use this as an avenue to receive follow-on training. If it is limited to aircrew, then NSW would assist a Tiger Team in supporting follow-on training and NSW Groups west and east coast.)

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-12, Change to read:

c. Student Profiles (Need to add in the IT, ET, SEAL NECs to this table)

INCORPORATED: NO

REMARKS: Current planning is for CSEL training to be included in PR "A" School. If this changes, it will be included in updates to this document.

COMMENT: Page I-13, Change to read:

I. ONBOARD (IN-SERVICE) TRAINING

a. Proficiency or Other Training Organic to the New Development. Naval and Marine Corps personnel will receive HHR proficiency training from FAILSAFE personnel or local AMSOs prior to deployment. All aircrew members will also receive CSEL training during refresher aviation physiology training at ASTCs as prescribed.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-14, Change to read:

3. Other Onboard or In-Service Training Packages. CSEL information will be integrated into existing OJT packages. Each Navy and Marine Corps unit has an OJT program that has been tailored to their operational requirements.

INCORPORATED: YES

REMARKS: None

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ACTIVITY NAME: Director, Total Force Programming, Manpower and Information Resource Management Division (N12)

COMMENT: Page I-7

 Maintenance Concept (Organizational) states that "O" level maintenance will be performed by PRs with NEC 83XX. Page I-8, Manning Concept, fourth sentence states enlisted ALSS (PR) personnel will perform maintenance of the HHR and CPE. Paragraph c., Recommended Qualitative and Quantitative Manpower Requirements, (2) Maintenance, states the HHR will be maintained by PRs, the CPC by Its, and the RSA by ATs. Recommend that the Maintenance Concept and Manning Concept paragraphs be revised to reflect that PRs maintain the HHR, ITs maintain the CPC and ATs maintain the RSA.

INCORPORATED: NO

REMARKS: Verbiage generalized. Numerous rating personnel will perform maintenance.

COMMENT: Page I-11

Delete the PR and AT courses from "Follow-on Training (Aircrew)" and add the PR course, C-602-2035, to the "Follow-on Training (Maintenance)" paragraph.

INCORPORATED: YES

REMARKS: None

COMMENT: Part IV

Unable to verify UICs shown for Aviation Survival Training Centers and Squadrons listed in this section.

INCORPORATED: NA

REMARKS: None

COMMENT: Part IV

HSL-30, HSL-31, and HSL-84 have been disestablished and deleted from this section.

INCORPORATED: YES

REMARKS: None

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COMMENT: Part IV

NATTC (PR and AT) "A" schools are not shown as receiving any training resources. If no resources are required, then the NTSP should state so. If training resources are required they should be included in Section IV and elsewhere within the NTSP as required.

INCORPORATED: YES

REMARKS: None

COMMENT: Page I-8, paragraph 3.c.(2), Maintenance

The last sentence states, "based on a manpower analysis, the ALSS, IT and Avionics Divisions will be able to maintain the equipment without an increase in manpower. However, on Page I-9, second paragraph from the top, the last sentence states, based on a manpower analysis, existing manning levels may not be adequate. These statements conflict each other, and the statement on Page I-9 does not specifically identify what work center/workload may not be adequately manned for incorporation of the new Combat Survivor Evader Locator.

INCORPORATED: YES

REMARKS: Verbiage corrected.

COMMENT: The points of contact for NTSPs listed needs to be changed to:

LCDR Gordon Lawry	COMM: (901) 874-6218
Aviation Department Head	DSN: 882-6218
NAVMAC (Code 30)	FAX: (901) 874-6471
raymond.lawry@navmac.navy.mil	
AZCS(AW) Randall Lees	COMM: (901) 874-6434
NTSP Coordinator	DSN: 882-6434
NAVMAC (Code 32)	FAX: (901) 874-6471
randall.lees@navmac.navy.mil	

INCORPORATED: YES

REMARKS: Incorporated with minor modifications to meet standard NTSP formatting.

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ACTIVITY NAME: Marine Helicopter Squadron One (HMX-1)

COMMENT: Page i, second paragraph

The OA was a joint test. Therefore the second sentence should read something like: "Joint OA was conducted by Air Force Operational Test and Evaluation Center, the Navy Operational Test and Evaluation Force, and the Army Operational Test and Evaluation Command."

INCORPORATED: YES

REMARKS: None

COMMENT: Page i, fifth paragraph

The second sentence is an example of where you have broken down the responsibilities between introduction of gear and refresher and pre-deployment of gear. 99% of the time that FAILSAFE team that is sent out will be AMSOs and AMSCs. To separate the two seems incorrect to me.

INCORPORATED: NO

REMARKS: Verbiage identifies FAILSAFE Tiger Teams as providing Introduction Training to operational units.

COMMENT: Page I-9, second paragraph under 4.

I question the second sentence where you say familiarization will be in the form of HHR training at basic Pilot and NFO school (FRS), ASTC, SERE training. There never has been any gear training at Pilot and NFO schools. ASTCs are going to do very general FAM type reviews (in 10 minutes or less) and I would assume that the SERE school actually does a more extensive lecture. I think that the Pilot and NFO school should be removed and the sentence should be reworded to say that ASTCs will only provide a brief overview on the usage of the radio. That is all of their capability at this point.

INCORPORATED: YES

REMARKS: Verbiage on CSEL training generalized. Some activities will receive a very brief overview while others will receive more in-depth training.

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COMMENT: Page I-10

I'm wondering where the class is that is going to teach JSRC operators? The rest of it looks great. We are missing that important step though.

INCORPORATED: NO

REMARKS: The JSRC is addressed in the Description of New Development section of this NTSP. The specific JSRC training should be addressed further in the UBS NTSP or in another form for NAVSEA.

COMMENT: Page I-10, paragraph b.(1)

I do not believe that you can say, "aircrew will receive instruction on the functions and proper use of the HHR at basic Pilot and NFO schools, ASTC, SERE. As I have already addressed: nothing at pilot/NFO, BRIEF overview at ASTC, and more in-depth at SERE. That statement implies entirely too much. The next sentence you say refresher training will be provided by AMSO. That should say initial and refresher training will be provided by local AMSOs prior to deployment if assets are available or on deployment if they are not available. When you list the schools, you don't list ASTC or Pilot/NFO schools either - further proving that this training at those sites don't exist.

INCORPORATED: YES

REMARKS: Verbiage on CSEL training generalized. Some activities will receive a very brief overview while others will receive more in-depth training.

COMMENT: Page I-11, paragraph (2), last sentence

FAILSAFE and AMSO are same thing. The difference is that each deploying unit hopefully has their own AMSO and that is who they are going to call for this training.

INCORPORATED: NO

REMARKS: Verbiage is generalized to indicate either a FAILSAFE Team or the local AMSO.

COMMENT: Page I-12, paragraph(1)

"All aircrew members will also receive Radio Set training during refresher aviation physiology training at ASTCs as prescribed." That was not budgeted for nor do they have the time in that curriculum to do such things. Besides, the only people that need RSA training are the PRs or selected pilots, or ATs, etc. that are chosen to be the loaders.

INCORPORATED: YES

REMARKS: None